

RAILWAY AGE

SEPTEMBER 17, 1949

100 Million Miles on the Seaboard

In October 1938, the Seaboard Air Line received its first General Motors Diesel unit and became the first railroad in the South to adopt Diesel power for mainline service. This unit and subsequent General Motors Diesels power the great "Silver Fleet," consisting of the "Orange Blossom Specials," the "Silver Meteor," the "Silver Comet" and the "Silver Star." The result: considerably faster schedules and new standards of luxurious rail travel from New York and Washington to Florida. Today, the Seaboard has in service 117 General Motors Diesel units which have accumulated more than 100,000,000 miles in passenger, freight and switcher service.



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RAILWAY AGE

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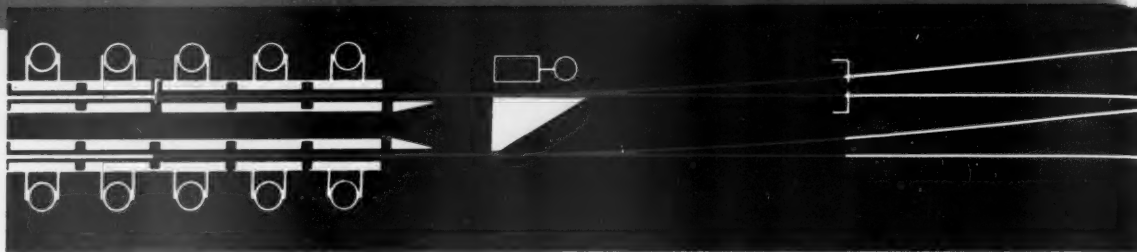
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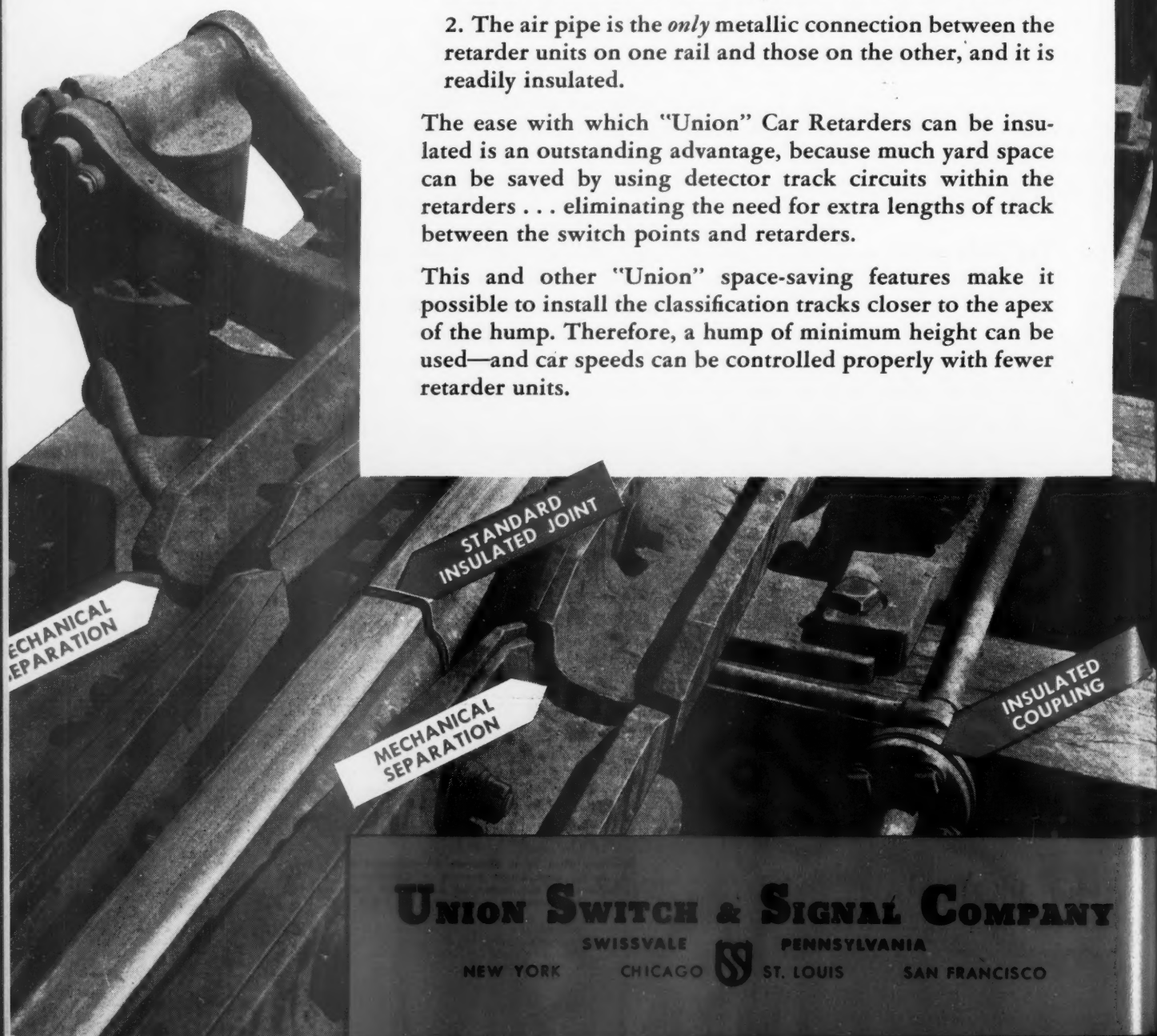
. . . . it is easy to insulate for detector track circuits

Because:

1. Unit-construction permits easy mechanical separation of the brake shoes and brake beams at the point where a standard continuous insulated joint is installed on one rail.
2. The air pipe is the *only* metallic connection between the retarder units on one rail and those on the other, and it is readily insulated.

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WEEK AT A GLANCE

BUDD INTRODUCES VERSATILE NEW RAIL CAR: On September 19 the Budd Company will introduce its latest innovation in railroad passenger-carrying equipment—an 85-ft., 90-passenger, self-propelled Diesel rail car, designed for use either by itself or in trains under multiple-unit control, and suitable for use on branch lines, in commuter service, or in supplementary main-line service. The car is fully described in the article which starts on page 68.

THE HEADACHES OF SOCIALIZATION: Bill Schmidt, *Railway Age's* transportation editor, who aroused the envy of other staff members by spending his summer "vacation"—and some additional time—in Great Britain, sums up, beginning at page 74, his views of those aspects of Britain's socialized transport which are of greatest significance to American railway officers, employees, customers and security owners. Nationalized transport's biggest single headache, Bill found, was the problem of "integration," both as between the railroads themselves and as between the railroads and competing forms of transportation. In addition, he reports, the theoretical advantages of a public transport monopoly are offset by such practical obstacles as uncertainty, insecurity, lack of incentive, conflicting purposes, political considerations, pressure-group wrangling and bureaucratic procrastination.

"MORNING-AFTER" MISERIES: Among the leading advocates of Britain's socialization binge were its railway employees. And yet, as Bill Schmidt's report—based in large part on actual talks with many British railroaders of all ranks and occupations—clearly indicates, there is today no group which is more disappointed, more dissatisfied or more disillusioned with the results of socialization as applied to railroads. Labor, to date, has gained absolutely nothing from nationalization, and is losing the security of employment which it considers so important and which it enjoyed to such a high degree under the old system of private ownership. The artificial stimulation which a binge of any kind usually induces appears to be wearing off, and in its wake are coming the inevitable results.

TRANSPORT STUDY: As reported in the News, President Truman has asked Commerce Secretary Sawyer to study, and report to him by December 1, on the activities and policies of the various federal agencies which deal with transportation.

THE MISSOURI PACIFIC STRIKE: As this issue of *Railway Age* went to press, the strike of operating employees on the Missouri Pacific which began on September 9 was still in progress, although, as our News story on it states, there appeared to be good prospects for its reasonably early settlement. Whatever else they may gain—if anything—the strikers seem to be on the losing side so far as public opinion is concerned, judging from St. Louis and New

York newspaper comments and editorials quoted in our News pages. We hardly see how the public could feel otherwise.

GRAND STRATEGY: Our leading editorial (page 65) declares that the Missouri Pacific strike is part of a long-term "shakedown" policy on the part of the operating brotherhoods to gain some easy money. We hope some of the brothers, at least, will read enough of Bill Schmidt's report on the British railways to find out how very much better off American railroad employees are than their opposite numbers in socialized England.

MORE MECHANIZED ACCOUNTING: As articles in previous issues of *Railway Age* have frequently demonstrated, greater mechanization of railroad accounting procedures can produce many advantages, including reduction in the cost of doing the work. This, and other benefits, are being obtained by the Pennsylvania from its program of concentrating station accounting work, with central machine-equipped offices doing the work for many agencies. For details of the plan and procedures, see the article on pages 90 and 91.

LINE CHANGE SOLVES OPERATING PROBLEM: The illustrated article beginning on page 79 tells how the Great Northern is reaping handsome dividends from a recently completed million-dollar main-line relocation job in the Cascade Mountains.

FIRST HALF CAPITAL OUTLAYS EXCEED 1948: Gross capital expenditures by Class I line-haul railroads in the first six months of 1949 totaled \$711 million, exceeding those of the comparable 1948 period by 26.7 per cent, according to the latest "Monthly Comment" of the Interstate Commerce Commission's Bureau of Transport Economics and Statistics. The first-half increase was large enough, the "Comment" says, to indicate that total capital expenditures for the year will exceed the record 1948 total. Other articles in the "Comment," summarized on page 87, deal with the distribution of freight-rate increases by districts and by commodities; with territorial shifts in origination of traffic; with Dieselization, and with increase of main-line rail weights.

TO FEED THE HUNGRY FURNACES: To produce 800,000 net tons of finished and semi-finished steel, as the United States Steel Corporation's plant at Geneva, Utah, did last year, takes a lot of raw materials—ore, coke and limestone. Unlike some of its Eastern counterparts the Geneva plant receives its raw materials exclusively by rail—and ships out its completed products in the same manner. How the transportation job involved is organized and carried on by the Union Pacific, the Denver & Rio Grande Western, the Utah and the Carbon County is told in detail in the illustrated article which begins on page 82.

for the Cincinnati Union Terminal...

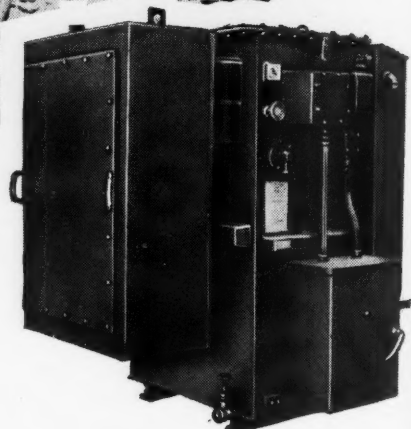
better **STATION STANDBY** facilities

... serviced by **OKONITE** cables



Flexible cables from standby power outlets supplying 240 volts a-c to air conditioning units of coaches in station.

One of the 16 power transformer substations fed by 13,200 volt Okolite-Okoprene underground cable. ▶



▶ To meet the growing needs of its seven tenant roads, the Cincinnati Union Terminal Company recently completed a newly-electrified system of yard and station service facilities. Prominent among these is the high-capacity, well-protected network of transformers and outlets along the station tracks to supply standby power for charging batteries and pre-cooling passenger coaches. 36,000 feet of Okonite underground cables—dependable and long-lived under even the most severe conditions—feed the transformers and link the power outlets.

Extending along each side of the 20-track station are opposite rows of eight power transformer stations, each row connected by Okolite-Okoprene 13,200-volt primary feeder cables. Secondary feeder cables, also of Okonite manufacture, are run at right angles to the tracks, each circuit running across ten tracks only, to

reduce the voltage drop. These cables connect with the standby power outlets spaced at 80-foot intervals alongside the tracks, from which 50-foot lengths of heavy-duty portable cables are used to connect with cars. Pre-cooling and charging can be carried on either separately or simultaneously.

Again, unusual installations have a way of turning out to be Okonite installations. For there is a wide range of Okonite wires and cables—for underground, overhead or submarine service—specially designed for railroad use. And long, trouble-free life is the true measure of cable performance and economy, especially in these days of high installation costs. Whatever your wiring or cable problems may be, consult an Okonite engineer or write to The Okonite Company, Passaic, New Jersey.



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M.P. STRIKE AN EPISODE IN NATIONAL "SHAKEDOWN"

The strike of 5,000 operating employees which closed down all activity on the Missouri Pacific in 10 states on September 9 is no isolated phenomenon. It is part of a national plan of the unions which represent those classes of railroad employees who already have the highest wages, proportionate to hours worked, to get for their members large sums of easy money by forcing the railroads, one by one, to grant their demands for additional back pay.

Basing their claims on tortured interpretations of the complex "working rules" into which the railroads, individually, have long since entered with their train and engine service employees regarding the division and extent of work performed, the brotherhoods have, for more than a decade, pursued, with increasing vigor, a systematic "shakedown." Adhering to a "divide and conquer" routine, they give individual companies, in succession, "the treatment," the chief ingredient of which is a threat to strike the property and thereby dissipate its traffic and revenues. Each railroad's capitulation, in turn, serves as precedent for insistence upon still more onerous rules and exactions.

Forgotten Pals

For some years the unions found accommodating allies in so-called "neutral" referees called in by the National Railroad Adjustment Board when carriers and unions deadlocked on back-pay claims. Many

of these men were of a leftist or "liberal" bias and, being wholly unfamiliar with railroad practice, issued decisions sustaining even the most absurd claims. These, in turn, were used by successors of the same stamp as precedents for similar decisions covering other lines and situations, so that there was built up a jungle of back-pay opportunities in which the brotherhoods could pick fruit at will. Typical of their *coups* was to exact from an eastern road a whole day's pay for train crews on each day in which they moved their trains from a station to a yard three miles distant, involving not more than 15 minutes' work, for which act the railroad had already paid an extra hour's wages. As much as \$8,000 was paid a single employee on this claim case, and the whole "settlement" cost the railroad more than a quarter million dollars in back pay alone, exclusive of increased cost and decreased flexibility resulting from changes in operations to avoid, or minimize, similar claims in the future.

In the event a company refused to pay a "shakedown" claim sustained by an N.R.A.B. referee (as it has the right to do), the unions customarily threatened to strike, rather than comply with the Railway Labor Act and take the case to a federal court, which, under the law, they could do without incurring court costs. This "sandbagging" often got the unions the results they wanted—and without the risk of airing their claims in open court.

So obliging were the referees and so effective the

strike threats, that the union officers boasted to their members of settlements they had forced; and seeking out potential claims which might be prosecuted before the N.R.A.B. became a widespread pastime among railroad men. When a bunch of boys demonstrate that watermelons can be filched from a farmer's field with little or no danger, it does not take long for youths who are otherwise honest to be attracted to the sport. By parallel psychology, otherwise honest railroaders were persuaded to allow the unions to file their claims in pyramiding amounts, with the result that the docket of the Adjustment Board's First Division developed a substantial backlog. Hence, in recent years, the brotherhoods, claiming their constituents had become impatient with the board's delays, have selected certain railroads for an experiment in short-cutting the N.R.A.B.

The new line of attack is to threaten to strike as soon as talks on the property, or mediation proceedings, have deadlocked. The unions may—as in the current Missouri Pacific strike—wait for a presidential emergency board to sit and report and for the cooling-off period to expire. On the other hand, as in the eight-day Wabash strike last March, they may walk out even before the fact-finding board is appointed. But the general pattern is becoming evident. There are even signs as to which roads are next on the list for "treatment."

On seven distinct occasions during the four-year negotiations over the claims in issue in the current strike, the Missouri Pacific has offered, or agreed, to submit the claims to neutral, outside arbitration—without strings attached—and this offer still holds. The carrier made it even though the unions refused throughout to take their claims to the Adjustment Board, a body created by the Railway Labor Act which the unions themselves sired. The unions have refused all offers of arbitration. The carrier has also tried to reach an agreement to formulate definite standards for handling these claims and eliminating such grievances in the future. The four unions informed railroad spokesmen they are not interested in making agreements but in collecting money for their men. They insist on serving as both judge and jury in their own cause.

Both Player and Umpire

When, because the unions called a strike on the Missouri Pacific, President Truman's emergency board came on the scene, it was asked by the organizations to pass upon the specific claims in dispute, but, as the board itself reports, they "made it clear that they would not obligate themselves to accept the board's recommendations." The brotherhoods, in short, would accept only the decisions they liked. The board tried to get the unions to use the facilities of the Adjustment Board. They refused, even though their chief officers had recently agreed with the railroads that there be established

two supplemental adjustment boards to help clear up the backlog of cases. These bodies are ready to function as soon as Congress appropriates the necessary funds for their maintenance. Concerning this the emergency board commented:

"We should like to point out that, if it is permissible under the Railway Labor Act for employees to circumvent the functioning of the Adjustment Board merely by creating a situation that calls for the appointment of an emergency board, the act has lost its efficacy for maintaining harmonious and orderly relations in the railroad industry insofar as operational disputes are concerned."

As an alternative, the emergency board urged the creation of a temporary separate board of adjustment on the Missouri Pacific (the law provides for system boards) to dispose of the disputes at issue in the strike, as well as 1,800 more claims that have accumulated in the meantime. This suggestion "was not sympathetically received." Reviewing the unions' persistent refusal to use either the normal machinery of their own Railway Labor Act or to accept arbitration, the President's board declared:

"Grievances of the character here under discussion are so numerous and of such frequent occurrence on all railroads that the general adoption of the policy pursued by the organizations in this case would soon result in the complete nullification of the Railway Labor Act."

THE VALUE OF SECONDARY SAVINGS

There probably have been innumerable instances where railroads have missed an opportunity to save money by failing to install new shop machinery because the full savings that would be realized were not taken into account when considering the justification of the appropriation to buy the new machine or machines. Frequently new machinery has not been bought because consideration has been given to the primary saving only. In such cases, no thought has been given to secondary savings, which can easily be as great as, and sometimes greater than, the saving directly attributable to the new equipment.

For example, consider a shop that is investigating the feasibility of purchasing a new lathe, which, for the sake of keeping the arithmetic simple, costs \$10,000. The savings to be made in the shop in which the new lathe is installed may amount to \$1,000 per year, or a return of 10 per cent on the investment. Probably this is not considered to be a sufficiently high return to justify the purchase, and the machine is not bought. But this analysis omits the saving which the older lathe, replaced

by the new one in the main shop, would make when transferred to a secondary shop or roundhouse. This additional saving might increase the return on the outlay for the new lathe to a point where the investment would be attractive.

Management is in a position to do a more complete job of analysis in such situations than the officer in charge of only one shop. That is to say, the individual shop superintendent is in a position to estimate what he can save in his shop by replacing a given machine; he is not in a position to judge what can be saved by some other shop remote from his if the outlying shop is given his old machine to replace a still more obsolete machine there. Management is in the position to instigate joint consideration among the shops involved and to sum up the individual savings. By thus considering the *total* savings that can be made, then, and then only, can the proper decision be reached on the purchase of new machinery. Very likely a good deal more new and modern machinery would be found economically justified than is currently being acquired if all factors were taken into consideration.

MAINTENANCE FORCES SEEK A BETTER BREAK

Recent years have witnessed closer cooperation between the operating and maintenance-of-way departments than ever before, with largely increased production and economies in roadway and structures work. However, with the shorter work week and higher labor costs now in effect in the maintenance department, what may in the past have been considered quite satisfactory cooperative measures, will henceforth prove inadequate in securing essential economies. In fact, there are plenty of indications that some in the operating department—including operators, dispatchers, trainmasters, yardmasters, superintendents, and even some higher operating officers—still do not comprehend fully the importance of close cooperation with the maintenance-of-way department, not only in enabling it to conserve labor, but to make effective use of the costly machines now employed in roadway operations.

It is axiomatic that two objects cannot occupy the same place at the same time. This is nowhere more obvious than in the case of a railroad track, especially where the objects involved are moving trains. The axiom is equally applicable to trains and track maintenance gangs and their power machines—one or the other must give way—that is, clear the track for the other.

In answer to a question recently put to a considerable number of chief maintenance officers as to how the operating department, under the 40-hour week, can help further to increase the efficiency of the roadway forces, there was a unanimous plea for more liberal use of the track in order to permit increased production — by detour movements in multiple-track territory, by “fleeting” trains, by scheduling train movements outside of working hours insofar as possible, and by making available to the track forces at all times accurate information as to train movements.

Other answers to the question suggested further cooperation on the part of operating officers in promptly furnishing motor car line-ups to enable the track forces to get to their work with minimum lost time; in permitting the most effective use of portable telephones on the job to provide close scheduling of work operations; in furnishing proper power and equipment for work-train service; in promptly furnishing crews where needed for roadway machines; and in supplying trucks and mechanical equipment, where they can be made available, for maintenance work.

None of these maintenance officers reported that these practices are not being followed to some extent on their roads today, nor is there indication elsewhere that all of these practices are not in effect to a greater or less degree on most roads. The plea of the maintenance officers, however—under the new circumstances prevailing—is for more widespread, general application of these practices—to the absolute maximum possible, without disadvantages to the operating department which counterbalance the advantages to the maintenance department. Such problems need to be looked at in the light of securing the maximum economy for the operation of the property as a whole.

Every thinking American will, I am sure, readily agree that the railroads are an indispensable form of transportation. *Actually, in fact, a great danger lies in their indispensability.* The fact that we must have the railroads—that this country cannot survive without them—has for many of us the same effect as an absolute guarantee that we will always have them, just as we have the air to breathe and the water we drink. Too often we reason that since we *must* have railroads, we *will* have them. I, too, believe we always will have railroads—but will they always be a large segment of our free enterprise economy as they are today? The answer to that question depends to some degree on the railroads themselves. But to a much larger degree it depends on the clear thinking and dynamic convictions of the majority of the people in this country. I say clear thinking plus dynamic convictions because it requires positive action based on clear thinking on the part of the American people to assure the continuation of our railroads as an integral part of our free enterprise system.

—E. T. Moore, president, Central of New Jersey

BUDD DIESEL RAIL CAR HA

Light stainless-steel vehicle with two G.M. power plants and torque-converter transmissions underneath meets A.A.R. strength requirements



Above—Budd stainless-steel rail car powered by two G.M. Detroit Diesel engines mounted underneath the car. Below—Partial bulkheads carrying the engine services to the radiators on the roof measure 19 in. longitudinally



AR HAS SEATS FOR 90

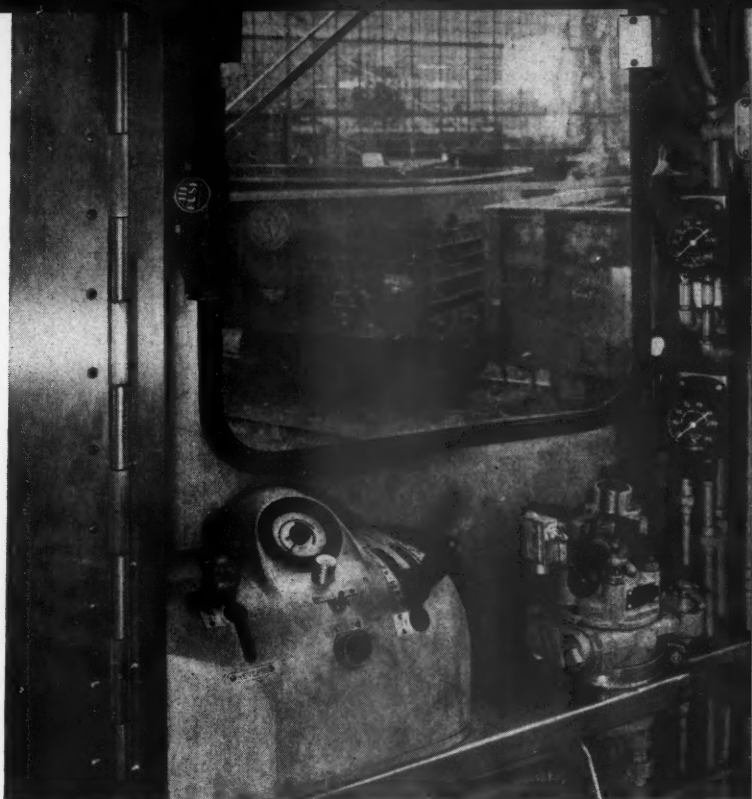
A self-propelled stainless-steel passenger car powered by Diesel engines, with hydraulic torque-converter transmissions, is being introduced to the railroad industry by the Budd Company at Chicago on Monday, September 19. The car was driven to Chicago immediately after completion of extensive tests which were made on the Delmarva division of the Pennsylvania. The motive power consists of two 275-hp. General Motors Detroit Diesels, integral with each of which is a torque-converter transmission built by the Allison Division of General Motors. The engine and transmission unit is designed for operation with the center line of the cylinders a few degrees above the horizontal so that they can be mounted underneath the car body. This is an outgrowth of a wartime development which was used for the propulsion of heavy tanks.

The car is 85 ft. long, coupled, and because there is no encroachment of the power plant on the space within the body, it has comfortably spaced seats for 90 passengers, with a toilet and electrical locker and a vestibule cab at each end. It weighs 112,800 lb. ready to run. It is designed for use singly or in trains under multiple-unit control, with a single operator, and is intended for full-scale service on branch lines, for supplementary main-line service, and for commuter service.

The rail-motor cars built following World War I were largely developed as a means of reducing losses in the then declining local passenger service. They were less than fully qualified for main-line service and power plants occupied space within the car bodies. The new car is intended to provide an attractive service as far as passenger comfort and speed are concerned and to provide it on an economical basis by not encroaching on potential revenue space and by care in design to simplify maintenance. It is conceived to offer a means of restoring some part of the local business which competing agencies have taken away from the rails during the 1920's and since.

Three types of interior arrangement will be available. One, the type already built, is a passenger car with seats for 90 persons which the builder designates RDC-1. Another will provide a 17-ft. baggage compartment and seats for 71. The third will have a 15-ft. railway-mail-service compartment in addition to the 17-ft. baggage compartment and will seat 49. These will be designated RDC-2 and RDC-3, respectively.

The car body is a stainless-steel structure, fabricated by the Budd Shotweld process. Unlike earlier Budd-built cars, the sides of this unit are girders, of which corrugated side sheets form the webs and to which are



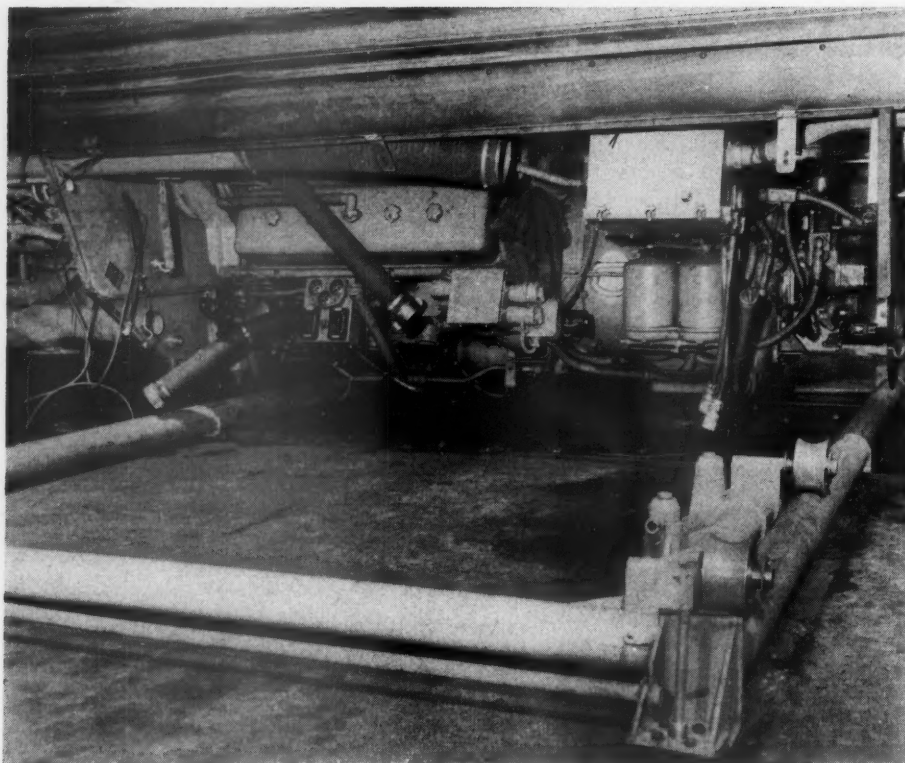
Operator's stand at the end of a vestibule



Truck frames are lightweight welded structures

A power plant being lowered onto the dolly preparatory to installing under the car





Transverse tubular rails in place under the car preparatory to removing a power plant

attached the outside fluted stainless-steel surface. The car is designed to meet fully the strength specifications of the Association of American Railroads. The center of gravity is 52.6 in. above the rail, an effect which is due in part to the location of the engines, transmissions and fuel tanks below the car floor.

The seats were especially designed. They are the walkover type, are comfortable in shape, and are low enough not to need footrests. This gives an unusually high space under the seat which adds to the leg room. Lighting is by fluorescent units in the center of the ceiling and lens type incandescent reading lights on the underside of the luggage racks over the seats.

The Power Plant

During the war there was a large demand for medium-size Diesel engines for use in armored tanks, small boats and landing craft for various branches of the military services. Because Diesel engines of the sizes needed were not available, it was necessary to utilize multiple-engine power plants. These were so successful that they have been continued in many commercial applications since the war. After the war the Detroit Diesel Engine Division of General Motors undertook the development of a larger engine than that available during the war. This is the engine in use in the new Budd car.

There are a number of reasons for the selection of the 275-hp. two-cycle Diesel engine manufactured by the Detroit Diesel Engine Division for this service. It would have been impossible to employ one engine of the necessary capacity placed under the car without encroaching upon revenue space. Each engine can be placed adjacent

to the axle which it drives, simplifying the mechanical connection between engine and driven axle. Each engine, being smaller in size and lighter in weight than a single power plant, is less difficult to remove for maintenance. The two-engine installation gives greater reliability than would a single power plant.

These engines are two-cycle, with the cylinders inclined 20 deg. from the horizontal. There are six cylinders in line producing 275 hp. at a governor speed of 1,800 r.p.m. A maximum torque of 860 ft. lb. is produced at 1,200 r.p.m. Each engine is supported at three points on rubber mounts and is enclosed in a demountable aluminum box, on the outside of which Neoprene has been applied as a sound deadener.

The torque-converter transmission was selected for its saving of several tons in weight, as well as for its effect on the cost of the car. The Allison converter is essentially a combination converter and fluid coupling, with a lock-up clutch for direct drive so that the torque converter is used during acceleration periods only.

The reversing is accomplished by means of two sets of constant-mesh helical gears, one or the other of which is engaged to an extension of the engine shaft by a hydraulically actuated clutch to suit the direction of car movement desired.

The engine-cooling radiators are installed on the roof of the car and are connected by piping to insulated water tanks under the car. The exhaust-pipe and water connections from each engine are housed in ducts which form a partial bulkhead near the middle of the car. The water from the engine passes first through a storage tank under the car. This would normally be the water circuit during winter weather.

Operating one of the dolly jacks by which the engine is lifted in place. Engine starting and stopping buttons are shown at the right



When additional cooling is required, thermostats open pipes which bypass the storage tank and lead through the radiators. When the water temperature rises above 160 deg., the cooling-fan motors on the roof are automatically started by thermostatically controlled electric circuits. These fans cycle on and off under the control of the water temperature. Tests indicate that the heat-transfer capacity of the cooling system is adequate for the highest atmospheric temperatures.

Heat exchangers for the torque-converter fluid and lubricating oil form an integral part of the power plant. The pump which circulates the engine-cooling water delivers it from the storage tank or radiators, first to the torque-converter heat exchanger, then to the lubricating-oil heat exchanger, and then to the engine-water jacket.

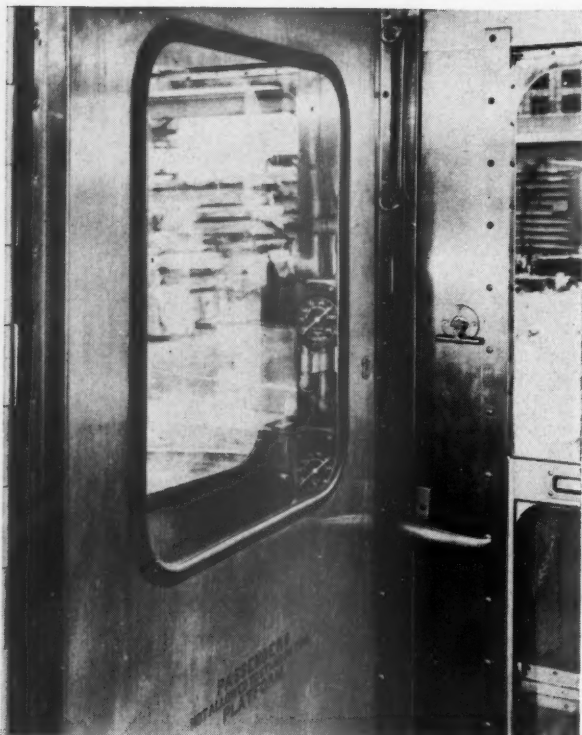
The Control System

An operator's station is located at the right-hand side of the vestibule at each end of the car. There is a master controller, the engineman's brake valve, a bell-operating valve whistle cord, an electric heater, a windshield wiper and defroster. The master control box has two handles. The one at the left has three positions—one for forward movement of the car, a middle neutral or off position, and a reverse-movement position.

The right-hand handle has five positions. These are off, idle, second, third and fourth. The latter three operating positions represent one third, two thirds, and full crankshaft torque. The electric control circuits are interlocked so that the power-control lever cannot be removed from the off position until the

Partial List of Materials and Equipment on the Budd Diesel Rail Car

Steel castings	Pennsylvania Electric Steel Casting Co., Harrisburg, Pa.
End underframe, truck frame.....	Youngstown Steel Car Corp., Niles, Ohio
Truck forgings	Canton Drop Forging & Manufacturing Co., Canton, Ohio
Truck springs	Union Spring & Manufacturing Co., New Kensington, Pa.
Shock absorbers—bolsters	Monroe Auto Equipment Co., Monroe, Mich.
Anti-wheel slide device; disc brakes	Budd Co., Philadelphia, Pa.
Coupler and yoke	National Malleable & Steel Castings Co., Cleveland, Ohio
Draft gear	Waugh Equipment Co., New York
Journal bearings	SKF Industries, Philadelphia, Pa.
Hand brakes	National Brake Co., New York
Air brake system	New York Air Brake Co., New York
Insulation and sound deadening	Gustin-Bacon Manufacturing Co., Kansas City, Mo.
Diesel engines	Detroit Diesel Engine Div., General Motors Corp., Detroit, Mich.
Torque converter	Allison Div., General Motors Corp., Indianapolis, Ind.
Axle drive unit; generator drive	Spicer Manufacturing Div., Dana Corp., Toledo, Ohio
Engine controllers; cooling and ventilating fans	Westinghouse Electric Corp., Pittsburgh, Pa.
Radiators	Harrison Radiator Div., General Motors Corp., Lockport, N. Y.
Muffler	Burgess-Manning Co., Libertyville, Ill.
Battery	Electric Storage Battery Co., Philadelphia, Pa.
Electric generator and controls; ceiling light fixtures.....	Safety Car Heating & Lighting Co., New York
Electric wire and cable	General Electric Co., Schenectady, N. Y.
Air conditioning	Frigidaire Div., General Motors Corp., Dayton, Ohio
Air distributors	Anemostat Corp. of America, New York
Air filters	Air Maze Corp., Cleveland, Ohio
Air grills	Barber-Colman Co., Rockford, Ill.
Heating system and accessories	Vapor Heating Corp., Chicago
Drop sash, parcel racks	Adams & Westlake Co., Elkhart, Ind.
Window glass	Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Panels and doors	Haskelite Manufacturing Corp., Grand Rapids, Mich.
Vestibule flooring	Alan Wood Steel Co., Conshohocken, Pa.
Floor covering—plastic tile.....	Johns-Manville, New York
Coach seats	Heywood-Wakefield Co., Gardner, Mass.
Hoppers	Duner Co., Chicago
Lavatories	Crane Co., Chicago



The operator's station is inclosed when not in use

direction handle has been set either in the forward or reverse position.

The torque-converter operates during acceleration up to a designated speed at which point the transmission automatically locks into direct drive. When decelerating, the direct-drive clutch is automatically released and the torque-converter restored to operation.

A foot-operated deadman's control, lighting switches and folding seat complete the equipment at the operating stand. With the control and brake-valve handles removed from the master control box and the seat folded down, the controls can be inclosed by swinging around 180 deg. the door which closes the end of the vestibule.

Each engine is started and stopped from the ground by push-button switches mounted on the side of the engine inside the housing.

Electrical Equipment and Heating

Provision is made for automatic protection of the engine against overspeed, overheat, or loss of lubrication. The pilot switches for these functions are connected in parallel, the closing of any of which closes the engine inlet damper, cutting off the air supply, stopping the engine and releasing the transmission clutch. In the case of engine or transmission difficulty while the car is running, manual declutching and idling is effected by a disconnect and shutdown switch in each electric locker for control of the engine at that end of the car only.

Electric power equipment consists of two 64-volt 10-kw. generators, one of which is a part of each

power plant. Batteries of 284 amp.-hr. capacity are carried in a stainless-steel box under the floor.

The car is air-conditioned by a seven-ton-capacity Frigidaire electro-mechanical system. Fresh air is taken in through screened openings at each side of the roof at one end of the car. This air passes through ducts to the plenum chamber. Recirculated air also enters the plenum chamber from the coach section. There are nine Anemostats through which the air enters the coach from the duct above the ceiling over the aisle.

The passenger compartments are heated by hot water circulated through finned radiator pipes at the usual location at the floor along the sides of the car. The water is drawn from the engine-cooling system and the car-heating radiators essentially take the place of the engine-cooling radiators during cold weather. Overhead heat is also supplied to the plenum chamber of the air-circulating system from the same source. The water is circulated by thermostatically controlled pumps, that for the floor heat being connected with the engine-cooling system of one power plant and that for the overhead heat with the engine-cooling system of the other power plant.

To prevent freezing during standby periods in cold weather live steam from a yard line may be fed to the cooling-water sump tank of each power plant through thermostatically operated valves. This maintains the temperature of the water in the tanks at 150 deg. F.

An overhead-mounted stainless-steel tank with a capacity of 75 gal. supplies water for wash bowls and toilets.

Trucks and Brakes

The four-wheel drop equalizer trucks are of special lightweight construction. The frames are built up by welding and have tubular side rails. The equalizers are forged I-beam sections, coil springs are used under the equalizers and swing bolsters and the bolsters are alined by longitudinal rubber-insulated anchor rods. The trucks have a wheel base of 8 ft. 6 in., 33-in. wheels and SKF roller bearings for 5½-in. by 10-in. journals.

Each engine torque converter is connected to the inside axle of the adjacent truck through universals to a spline driving shaft and a Spicer drive assembly. The drive has a spiral bevel gear driving a ring gear incorporating a splined quill drive to the axle. A torque arm, which compensates for lateral motion of the axle, is resiliently connected to the truck transom.

The trucks are equipped with the Budd disc brake, Model CF, operated by New York HSC type air brakes with the D22 control valve. Two cast-iron discs are employed per axle, against the sides of which the asbestos-composition lining of the shoes operate. The shoes are applied against the discs by tongs, the long arms of which are forced apart by the pressure in the brake cylinder. During the test runs service stops were made without sand from 85 m.p.h. at a deceleration of 2.8 m.p.h. per sec. Emergency stops were made at 3½ m.p.h. per sec.

For brakes operating at these high rates of retardation an anti-wheel slide device is essential. The Budd Rolokron system is applied on both trucks. This con-

sists of the Rolokron, which is mounted on a journal box of each axle, and a control box to which are connected the circuits from the Rolokrons. These are inertia devices which operate under the action of an excessive rate of deceleration of the wheels to close contacts which operate an electric solenoid valve in the control box to release air from the brake cylinder and, under control of a time relay, to reopen the circuit and reapply air to the brake cylinder after about one second.

Under the control of the Rolokron sand is automatically applied to the rail when emergency applications of the brakes are made. The application is to the leading wheels of both trucks, depending upon the direction of operation. When a single pair of wheels decelerates, sand is automatically applied in front of them.

Sand boxes, each of 100 lb. capacity, have been installed in the sides of the car between the interior wall lining and exterior sheathing, one over each wheel. Access to these is through spring-loaded watertight covers in the sides of the car just below the belt rail.

One of the outstanding features of the power-plant installations is the simplicity of the attachment to the car body. Each power plant, consisting of the Diesel engine and transmission, a 10-kw. electric generator, and oil coolers, is supported from the car body on rubber in compression at three points. Two of these are bolted connections at the transmission end of the plant and the other, tongue-supported in a suspension yoke.

It is not intended that more than minor adjustments and servicing are to be performed on a power plant while it is in place under the car. Whenever the engine and transmission need repair attention, provision is made for removing that power plant from under the car and replacing it with another, leaving the repair work to be done in a shop where all parts are accessible.

For the removal and replacement of the power plant a pair of rails of tubular section, spaced by tie rods at each end, are placed transversely under the power plant. Pads welded under these tubes support the frame on the track rails.

Running on the tubular rails is a dolly which supports three jacks, two at one end and one at the other. After the spline shaft and water and electric connections to the power plant have been separated, the dolly is rolled under the power plant until the jacks are in place under the pads on its under side. The jacks are then raised to support the power plant, the supporting bolts are removed from the transmission end, and the yoke in which rests the tongue at the other end of the plant is swung out of the way. The jacks are then lowered and the entire power plant rolled out from under the car where it can be picked up by crane for movement to the shop. Another plant can then be installed by the reverse process.

An engine has been removed from under the car by four men in 20 min. Based on experience to date, it is anticipated that a power plant can be disconnected, removed and replaced in an hour and a half.

Following the introduction at Chicago, the car will visit the major railway centers of the country for demonstration to railway officers.

Communication . . .

Shipper Cooperates to Cut Car-Cleaning Costs

CHICAGO

TO THE EDITOR:

It was encouraging to read the article on page 60 of the August 13 *Railway Age* on the subject of car cleaning. Because of our costs in cleaning and cooping the empties which the carriers set in at our several operations, we are very much concerned with the problem.

Shouldering the expense of car cleaning upon the carriers is only a partial answer, for as costs of transportation increase, the overall efficiency of our rail plant decreases and additional demands for rates are inevitable. It is our belief that there is hope for immediate relief if the problem can be corrected at the level where the trouble occurs.

To this end we have prepared and sent to all of our customers who receive our car-lot materials, including coal, a special message on the subject. In addition to this general letter, we are attaching to each bill a sticker which reads as follows:

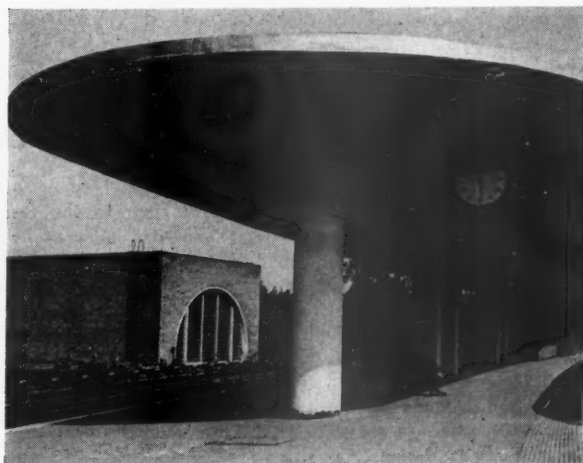
An Important Message to Our Customers

Railroad cars on cleaning tracks are costly to the carriers, to the shippers and to you. Please make it a point to completely unload your cars and refrain from loading debris therein.

The present high level of freight rates reflects the transportation costs of our railroads. Car cleaning, unnecessary per diem costs, extra switching to and from cleaning tracks and the loss of revenue from idle cars can be reduced with your help.

Despite the fact that our monthly total of cars loaded runs into the thousands, the program will need more help than can be given by any one shipper. For this reason it was good to see your August 13 issue. More help of this kind is needed and we are doing all that we can to solicit it from all of our carrier and industry friends, especially those in industry who have to foot the bill of "hidden costs" through our present high level of freight rates.

J. M. MICHAELS
Traffic Manager,
Consumers Company



Loughton station platform on the London and North Eastern



"INTEGRATION" IS THE

By WILLIAM H. SCHMIDT, JR.

Transportation Editor
Railway Age

Twenty months ago there were hatched some eggs upon which Britain's labor unions and doctrinaire Socialists had been sitting and brooding and clucking for 50 years or more. Four major railroads and numerous short lines became "the peoples' railroads." The idea is that the chickens should get together and live as one, but, somehow, the creatures feel naked and alone without their shells, and long for privacy. Even worse, to make certain that their nestlings will not succumb to lusty rivals in the struggle for existence, the bureaucrats running Britain have hatched out alien fowl—"peoples' trucks, buses, docks and canal barges"—and put them in the same barnyard. It's going to be wonderful, they say, to have these creatures sharing the same corn crib. Only nobody tells us who is to get how much nourishment—and what kind.

It's the Scrambling That Hurts

The chief cause of the unrest and uncertainty which are currently evident among British railroaders—both management and rank-and-file—are "integration" and "rationalization," which left-wing planners use as the chief excuse for their depredations in the fields of private ownership. Despite the fraternal bond which united the personnel of Britain's former railroad companies, no class of railroader looks with pleasure upon the end of separate-company status. Officers and su-

During his 25-day stay in Britain this summer, *Railway Age's* itinerant transportation editor stuck pretty close to the reportorial grindstone—albeit a pleasant one—and believes he talked to about every class of railroader and their customers. He didn't get to see any of the bureaucrats, but, since the latter are completely frank and even verbose about their opinions and aims, in public speech and print, he believes this lack is not important.

Bill Schmidt's letters from Britain appeared in *Railway Age* of July 30, page 46, and August 6, page 45. In this article he sums up his views on those aspects of the country's socialized transport which are most significant for Americans.—EDITOR

pervisors have lost the challenge of bettering competitive operating and financial performances; their exceptional lines of promotion, salary increases and perquisites; the privilege of direct action; and the guidance of business-minded boards of directors (which, in Britain, were relatively more important than here in the States). Employees have lost the sense of "belonging," the carefully cultivated company loyalty for which the British roads were noted. More important—and more dangerous—they look upon the scrambling and "rationalization" of the properties with a haunting fear of "redundancy."

Unemployment is considered by many British workers a worse scourge than war, because, in the past at least, it was a hopeless, rather than transitory, plight. During the prewar depression, railroad employees were more fortunate than their fellows in other industries because the four main-line companies, I am told, agreed with the government not to reduce their staffs except through natural attrition. On this ground, the railroads were relieved from placing the majority of their non-casual employees under the national unemployment benefit scheme.

Now that they work for the state, railroaders feel less secure than they did under their "capitalist masters." The British "Railway Gazette" pointed out some time ago that, in its opinion, both management and wage earners get less protection from loss of employment or compensation under the 1947 Transport Act, which nationalized the roads, than under the Railways Act of 1921, which forcibly amalgamated about 20 major and 100 minor railroads into four private companies.

If there is any justification whatever for socializing transportation it is that, maybe, lower rates for the customers can be squeezed from the reduction of duplicate facilities and services. It is this very aspect of the nationalization program which British workmen are fighting tooth and nail—both as individuals and as local union groups. Hence, we have the curious paradox that management—which, as corporate entities, fought nationalization and lost—must, at local points

Uncertainty, insecurity, lack of incentive, conflicting purposes, political considerations, bureaucratic procrastination—such practical obstacles offset the theoretical advantages of the public transport monopoly

BRITISH RAILROADS' BIG HEADACHE



Everybody rides trains in Britain; they are important politically

Photo courtesy British Railways

all over the system, sit with union representatives—who have worked for socialization for a half century—to try to get them to see the ultimate benefit of “rationalization” schemes.

Not only do the employees oppose the closing down of unremunerative branch lines and stations and the dismantling of superfluous parallel routes, but they show a militant dislike even for a transfer of officers and men from one former private property to another. They don’t like strange bosses and unfamiliar rails. Management has the job of convincing them that they must accept changes in routine or everybody on the railroads will go down the drain together.

As one railroader told me: “God knows I worked as hard as anybody fighting this nationalization; I

wrote pamphlets; I delivered scores of speeches; I argued with members of Parliament. But now the lawful government of the country has taken what is probably an irrevocable step, and as a citizen—and, now, servant of that country—I must try to make its railways work as well as I can. I must even argue with union spokesmen to get them to agree to steps which will make this nationalized show go.”

The law says the British Transport Commission—owner and operator of all nationalized railroads, canals, docks, trucks and buses—must have the aim of welding its hitherto competitive properties into one unified transportation machine, on which goods and passengers will be routed the cheapest and most efficient way. The on-the-ground management of Britain’s socialized railroads, I suspect, though, has quite another objec-

tive—the one it has always had: i.e., by unremitting work and investment to cut costs and improve service so that the railroads can hold and regain traffic from their road and canal competitors. The bureaucrats may be ordering the lion and the lamb to lie down together (in more ways than one!), but it is clear that both parties to the transaction, in seeking to preserve and enhance status and privilege, pin more solid hope on having a core of traffic to move than on the uncertainties of scientific allocation of business by government fiat.

Socialism Breeds Pressure Groups

One of the most stupid delusions in Marxist doctrine is the belief that, if you do away with the profit motive, the wrangling of pressure groups will cease. On the contrary, with government ownership, their conflict only intensifies. Most men engaged in business commit themselves irrevocably to certain skills, associates and values. Human beings are not interchangeable, standard parts which can be used in any machine at will. Coal miners and their supervisors cannot suddenly be put into the oil-producing business, if the latter should displace their functions. Similarly, a locomotive engineer cannot look with equanimity on the prospect of being told one morning that because trucks are deemed more efficient, he will have to start at the bottom in the motor transport business to learn the ropes. The fact that both trains and trucks are “the peoples’” and are run—way up top—by the same officers is no consolation for loss of a lifetime’s skills, associations and prestige.

Since traffic on rails is the best insurance of continuance of a railroad job, it is to be expected that British railroad men of all ranks will continue to work for “British Railways” and not for “British Transport.”

This is not to say that railroad men see no good at all in coordination with rival forms of transport. Despite the fact that the majority of long-distance common and contract carrier trucks have not yet been nationalized, railroad and motor freight traffic and operating officers in a number of districts have set up fairly successful local working machinery for ironing out mutual problems, such as possible merger of the separate local collection-and-delivery dray fleets of the railroads and truck lines. Housed, symbolically, in the same building—the former hotel at Marylebone station, London—the two top administrations of the socialized trucking and railroad industries, respectively, which are subordinate only to the overall Transport Commission itself, are working diligently on arrangements with which few transportation men could disagree. Thus for example, the Railway Executive is giving to the Road Haulage Executive, for study, a number of proposals for branch line railroad abandonments, which the railroads have long wanted, but hitherto dared not, to carry out. The trucking body will determine how much it would cost to provide substitute service by road and the two will then collaborate on proposals to the commission. Under nationalization the abandonment of “loss lines” of railroad will be easier than under politically hampered private ownership. (More intelli-

gent regulation would accomplish the same purpose.) Similarly both executives are studying proposals for the railroads’ taking over the long haul of certain shipments for the trucking administration, which would originate and deliver the freight.

As the largest operators of local drays in Britain; as, prior to nationalization, holders of a substantial interest in companies operating some 4,000 other motor trucks; and as pioneers in zonal schemes for handling less-carload traffic by substituting trucks for way cars, the British railroads are not strangers to motor truck operation and the values of coordination. Small competitive motor truck operators, with a tradition of jealous independence, will find integration far more onerous than the railroaders.

But beyond those limited segments of business which can be exchanged between the trucks and the railroads with evident mutual profit, the distribution of traffic is going to be *the* issue if and when the Transport Commission starts to carry out its expressed aim of achieving “a common commercial [traffic] organization at town and district levels—the point of contact with the customer.” Until that time is reached, the railroads and their rivals will doubtless continue to fight for traffic as before, with an eye to rates, good service and as many capital improvements as they can wangle.

Socialization of some of the railroads’ customers has not reduced pressure group wrangling any more than did socialization of the rival transport agencies. Among the most troublesome patrons of His Majesty’s railroads are His Majesty’s electricity boards which, in some districts, are seeking to get rate and service concessions by threatening to buy and run private truck fleets for their coal supply. And the nationalized coal administration is said to be making a profit this year very largely at the expense of nationalized railroads which claim to be paying exorbitant rates for fuel bearing very little resemblance to the prewar variety for which their highly efficient locomotives were designed. Hence the wrangling of the market place, which was, in the long run, healthy for society (tough though it was on the unfit individual and outmoded organization) is now superseded by the more bitter wrangling of bureaus in Whitehall over the division of the nation’s funds and resources—on political, rather than economic, grounds, with, of course, uneconomic results.

Loss of Competition

The process of unifying former competing railroads and, on top of that, seeking to unite them with rival forms of transport is not only the chief cause of the uncertainty existing among transportation men in Britain, but, more important, is held by many observers to be responsible for slowing up the rate of physical improvement of the properties.

Bad as it was at the end of the war, under-maintenance on the British railroads was even greater on the eve of nationalization, 2½ years later, not because the private companies lacked the funds or the courage to embark upon large-scale works and additions to rolling stock, but because the government refused to allow

them the needed men and materials. In July, 1948, the former companies turned over to the Transport Commission more than \$600 million (representing funds allowed, but not spent, on maintenance since national wartime control started in 1939).

In the absence of nationalization or loosening up of government controls, this sum, with additional funds available, would have been used by them to carry out a large number of badly-needed improvements. Undoubtedly, the country's overall material shortages have something to do with the failure of socialized transport to carry out work which even the maligned private companies committed themselves to do. But it is also true that the "top-drawer" bosses are so busy integrating and standardizing and grinding out policies that they cannot give attention to such "petty" matters as eliminating physical bottlenecks or building up war-worn rolling stock. Furthermore, uncertainty regarding the status of the various properties within the railroad net and the relations of that net itself to other forms of transport are holding up action on other needed projects.

Were the four main-line companies still in existence, their managements, facing the same nationwide difficulties, would take direct action to deal expeditiously with specific situations as they arise. Conditions at the close of World War I were exceedingly difficult for the railroads—so much so that they barely escaped nationalization in 1920. But their managements rolled up their sleeves and, in degrees varying with relative skill in administration and command of resources, worked the roads out of the morass in good time—despite the perplexities introduced by forced amalgamation.

To work for a commercial-minded board of directors,

whose members know their way around in the business world, and to stake one's salary and reputation on ability to turn gross into net undoubtedly provides an incentive which "British Transport" can never produce. The old companies differed widely in earning power (although, as a whole, their stockholders fared better in the depression years than their counterparts in the United States). These differences were not the result entirely of territorial characteristics, because the rich and the poor changed places between amalgamation and the beginning of World War II.

Is it not reasonable to suppose that corporate prosperity, due in part to managerial energy, was reflected in salary and promotion opportunities which, in turn, excited even greater activity? If so, now that financial accounting is to be made for the railroad net as a whole, and the chiefs of the "regions" (properties of the former companies or segments or combinations thereof) are shorn of much of the freedom to act and to spend enjoyed by the old-time general managers, how is that incentive to be preserved?

Labor Likes It Not

The chairman of the Railway Executive, formerly head of the Southern, has himself stated: "I will confess that one of the things that disturbs me in this vast reorganization is the problem of incentive." He expressed the opinion that nationalized transport must get the highest quality employee and officer, for whom, perforce, it must compete in the commercial market; that "the standard of comparison should be with outside industry." Can he accomplish this ideal without the spur of profit?

The problem is not confined to incentive for manage-



The multiple-unit controlled "Brighton Belle" helps in the task of carrying London to the seashore

ment. If the British public are to get the cheaper and better transport which the socializers promised, some measures must be taken to get employees to identify the public interest with their own. Otherwise, with their inbred fear of unemployment, they will block every one of management's moves toward efficiency and make impossible the attainment of self-sustaining operations, now required of the Transport Commission by law, or of the hope of lower rates promised by their own Labor Party.

The pay of British railroad employees, which averages about \$25 a week, is not excessive. And, pretty generally, a man puts in a day's work for a day's pay. There are no run-one-day-fish-the-next operating assignments. The engineer of a fast passenger run gets no more pay in a week than his brother on the lowliest switcher and he works six days most weeks. He is required to share the "cream" runs with others of his craft by working progressively through a cycle, or "link," of runs varying in desirability. Passenger trains, however long, generally carry only one "guard," and, occasionally, a ticket collector. Freight trains, most of them lacking continuous brakes, are nevertheless manned but by one trainman, or guard, in addition to the engine crew. The single main-line Diesel locomotive in the country carries a two-man crew, but, so far as I know, yard Diesels and main-line electric locomotives carry but one man in the cab. There are no arbitrarinesses for grades or pay gradations based on weight on drivers. The operating department can hang anything it pleases behind any locomotive on the road or in the yard, without paying "penalty days" to the crews that did and the crews that didn't—for mixing the service. Any road crew can be required to switch anywhere and as often as necessary.

With their intensive traffic, the British roads do not frequently combine classes of service, but even the possibility of flexibility without ruinous penalties therefore is, in my opinion, a big reason why they can make money in such businesses as l.c.l., commuters and parcel express—or did before nationalization—while American operating ratios in these categories are high as cricket scores.

Even though he is not guilty of featherbedding or of drawing excessive pay, the British railroad employee can still stymie the success of "British Railways" by seeking uneconomic wage increases and, more important, obstructing the introduction of labor-saving machinery to cut costs. One thing is clear: The socializers were dead wrong when they promised that nationalization would cut industrial strife because the workers would feel better about "slaving" for the people than for their capitalist masters. Almost entirely free from

strikes between the wars—except for the general strike of 1926, which involved most industries and even government bureaus—the railroads, since nationalization, have been the scene of sporadic local strife, with slow-downs and failures to report for runs on the increase. These disturbances are, in part, gestures by local union "wildcatters" against what they consider treason by former high union officers in identifying themselves with the management of the nationalized industry.

Labor Troubles Likely to Become Worse

Restrained though the British are in political struggle, it seems likely that union-management-government troubles on the railroads will become worse. The National Union of Railwaymen, a "leveler"-type vertical industrial union, which claims to have 460,000 members out of a total of about 600,000 employees, aims, among other things, at a closed shop on the railroads, "one big union," and "to work for the supersession of the capitalist system by a socialistic order of society." It declares direct representation of the union in Parliament to be a worthy object, for which it is now employing its "political fund" to the utmost, and boasts of having 14 members in that legislative body.

Despite the fact that its former head is one of four full-time members of the top-level Transport Commission, the N.U.R. declares that the present set-up "lacks the essential ingredient for the attainment of maximum efficiency and the aspirations of organized workers"—the "ingredient" being "workers' participation in the control of the transport industry at all levels." When the organization of British transport was announced in November, 1947, the newspaper of the N.U.R. called it "bureaucracy run riot"; complained because the members of the Railway Executive were chosen "largely with an eye to technical knowledge of railway work"; and stated flatly that "the danger is that railwaymen will learn to hate their 'expert' governors more than they hated the railway companies." In a recent release, the union predicted that establishment of a new role for workers in management "seems likely to prove the dominating problem in the coming years." With that prognostication there can be no disagreement.

The employees of Britain's railroads and other nationalized industries may someday see through what the newspaper "Economist" calls "the wholly false notion that what matters is who owns industry—not how it is run." An important company head in England told his stockholders recently:

"I have a feeling that if the chancellor of the exchequer were to stand in front of a beehive he might exclaim, 'But this is too disorderly for anything; these bees flying about in every conceivable direction. There must be great waste and inefficiency here. We must bring order and planning into all this'."

After 20 months of "order and planning" in railroading, most people in Britain feel like the old household servant who, having spent her life in a busy city, was retired and advised to pick a good, quiet spot in which to enjoy her last years. After spending a few weeks at a noted resort she wrote her employer: "It's lovely here; I don't like it."

The trucking industry calls attention to the large sums it pays in license fees, gasoline taxes, and other levies. But this money makes up a very small percentage of the ever-growing total we are spending on road building, heavier bridge construction and repairs. All the taxpayers are contributing huge sums to subsidize commercial trucking through the construction and maintenance of enormously costly highways of a type normal traffic does not require.

—Gallipolis, Ohio, *Daily Tribune*

Portions of both the old and new lines across the Nason Creek canyon are seen here. The Great Northern's eastbound "Cascadian," en route from Seattle to Spokane, is emerging from the 675-ft. tunnel on the relocated line. The old bridge at left, on 10-deg. curve, is to be removed this fall



Line Change Solves Operating Problem

Relocation of Great Northern main line in the Cascades, involving heavy construction, eliminates ill effects of slowdowns caused by previous heavy curvature

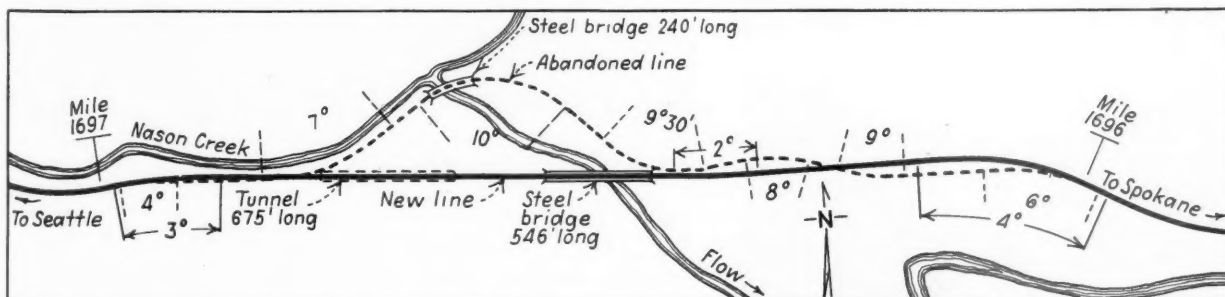
A mile-long, single-track, line-relocation job that created a variety of tough engineering and construction problems, but one that is already paying off handsomely, has been completed by the Great Northern on its main line in the Cascade mountains. A million-dollar project, this relocation was carried out in the road's 73-mi. electrified territory at a point 46 mi. west of Wenatchee, Wash., where the line crosses Nason creek, a turbulent mountain stream that has cut a deep ravine in the granite and schist forming the mountain slopes. The principal engineering features of the relocated line are a 675-ft. tunnel, a 546-ft. steel viaduct, and an 1,825-ft. section of track, extending through the tunnel and across the viaduct, that is laid with Oxyweld pressure-welded continuous rail.

The relocated line is 5,089 ft. long, 301 ft. shorter

than the section it replaces. What is far more important, however, is the 207-deg. reduction in curvature realized. The old line, which was part of the original survey made through the Cascades more than 50 years ago, had seven curves with a maximum of 10 deg. By relocating the line four of these curves were eliminated, one was reduced from 6 deg. to 4 deg., and another from 4 deg. to 3 deg. Reduction in maximum grade was nominal—from 2.2 per cent to 2.09 per cent.

Benefits of Reduced Curvature

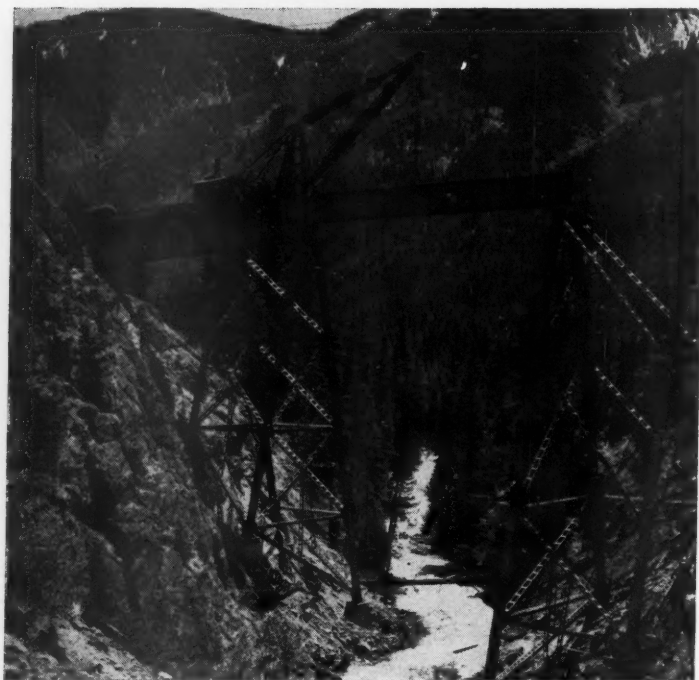
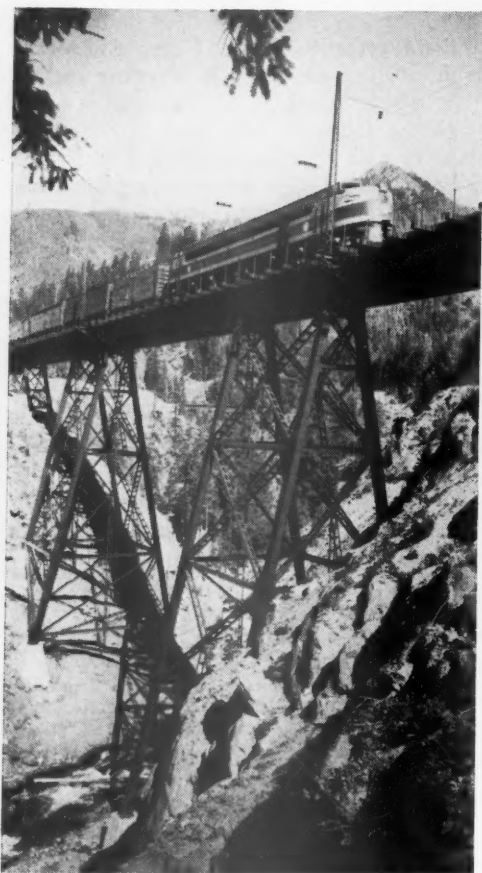
Not only is the reduction in curvature expected to produce substantial savings in track maintenance costs, but the advantages in connection with heavy train operation have already been demonstrated since the



The change of line resulted in the elimination of 207 deg. of curvature and a reduction in distance of 301 ft.



Left—Inside the tunnel after it had been partially holed through at the west end. It was later lined with concrete pumped into steel forms. Below—Locomotive of the westbound "Cascadian" emerging from the west portal of the tunnel. The old roadbed extends along the mountain-side at left. This picture was made before track gangs had dressed the ballast shoulder



Above—One of the 96-ft. girders being lowered into position in the center span of the Nason Creek viaduct. Left—Eastbound time freight No. 442, drawn by one of the two 5,000-hp. G. N. electric locomotives, moving at full speed over the new Nason Creek viaduct. The old line's heavy curvature introduced complications in the operation of heavy freight trains such as this

new line went into service on July 15. Because of the heavy curvature and the hazard of slides on the original alignment all trains approached it at reduced speeds. With passenger trains this meant only a slight loss of time, but with heavy freights assisted by helper locomotives the necessity of slowing down on an ascending grade of 2.2 per cent created a situation in which the breakage of drawbars was a constant hazard.

For example, if, when the head-end locomotive of such a train began to slow down, a bad rail condition caused the driving wheels of the helper locomotive to begin slipping, slack surges were set up in the train that were apt to cause a weak drawbar to break. A similar hazard was presented when a train was accelerating back to normal speed after the slowdown. During regeneration on the descending 2.2-per cent grade the slowdown was accompanied by slipping drivers and sometimes a tripping of locomotive overloads, resulting also in slack surges and broken drawbars.

With the relocated line in service and with the danger of rock slides eliminated there are no speed restrictions and consequently the hazard of broken drawbars has been minimized. And as an extra dividend there is a saving of about five minutes per train in the 7.03-mi. run between Berne and Merritt stations west and east, respectively, of the relocated section.

Modern Tunneling Job

The single-track tunnel built on the relocated line has a clear inside width of 18 ft. and a semi-circular arch with a radius of 9 ft. The clear height from the top of rail to the underside of the arch at the crown is 24 ft. It was excavated in a full-face operation and the work was progressed on a round-the-clock schedule. The drilling work was done from a track-mounted jumbo, and the mucking operation was performed by an electric shovel, which loaded the material into electrically operated, narrow-gage dump cars.

A concrete mixing plant and a Pumpcrete machine were set up a short distance outside the east portal, and the concrete for the tunnel lining was pumped into steel forms. The tunnel was constructed under contract by the Morrison-Knudsen Company, Seattle, Wash., which company also built the substructure for the viaduct and did the grading for the relocated line.

The viaduct built to carry the new line over the Nason Creek canyon is a short distance east of the tunnel. It consists of nine deck-girder and beam spans supported on a substructure involving three steel towers, a number of concrete piers, and concrete abutments, all founded on solid rock. The structure is on a tangent alignment and a 2.09-per cent grade ascending westward.

Included in the viaduct are two 96-ft. girder spans that extend over Nason creek and a sidehill gully near the west end of the bridge.

Construction work on the substructure of the bridge was completed late in the fall of 1948, but heavy winter snows delayed further progress until April of this year. Erection of the steel was started about May 1 and was completed on July 1. The steel towers were erected with the help of a cableway placed on the center line of the bridge, with supports back of each abutment. The cableway was also used to handle light bracing,

ties and light equipment. All girders and beams were placed with a derrick car with a 65-ft. boom.

The viaduct, which contains 629 tons of structural steel, was fabricated and erected by the American Bridge Company. Railway forces completed the bridge deck, and after the opening of the new line these forces painted the steel and built trainmen's walks on each side of the bridge.

The 1,825 ft. segment of track on the new line that was laid with continuous rail extends from the west portal of the tunnel through the tunnel and across the viaduct to a point just beyond its east end. This track is laid with 115-lb. rail, which was welded into continuous lengths at the same Oxweld "assembly-line" setup that was used this spring at Scenic, Wash., to provide continuous pressure-welded rail for four miles of the Great Northern's 7.79-mi. Cascade tunnel.*

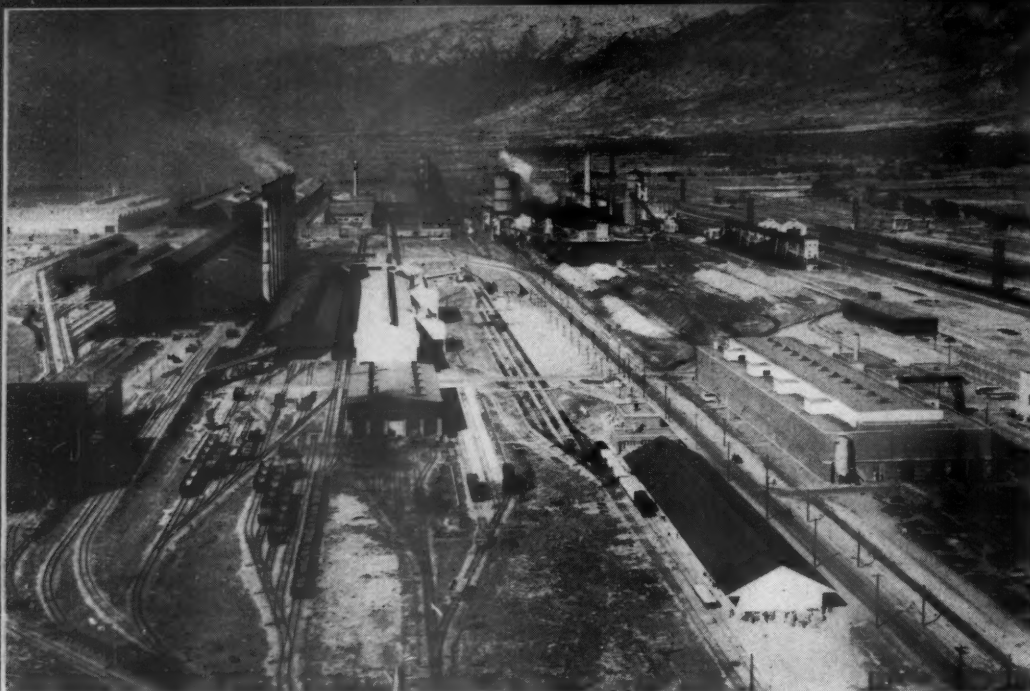
Construction work in connection with the electrification of the relocated line presented unusual features in that this work had to be completed on the date specified and at the same time could not interfere with the work of bridge- and track-construction crews. Also, since the electrification work was performed by the regular line-maintenance crew, the work of this crew had to be divided between the new construction and its routine maintenance activities without detriment to either.

By making judicious use of all openings between bridge and track crews the line crew got its poles set first. Then, after the track and bridge work had been completed the line-maintenance crew, with the aid of the line-maintenance tower car, applied pole masts and insulators, and began stringing the messenger and trolley wires.

The electrification incorporates the Great Northern's standard inclined-catenary design of overhead construction, with some modification in span lengths to get a better standard trolley-hanger pattern. Two standard span lengths were used. Outside the tunnel there are 24 spans having a standard length of 150 ft. These spans embody a mast-arm type of construction on cedar poles with creosoted butts. Inside the tunnel there are nine 75-ft. spans with insulators mounted in recesses in the tunnel arch. Use of the 75-ft. and 150-ft. trolley spans simplifies the number of different trolley-hanger lengths to be carried. The messenger, or catenary, consists of a 19-strand No. 7 calsun bronze wire which supports the trolley—a 4/0 bronze wire. Trolley height above the rail is 24 ft. The final cutover from the old to the new trolley was completed at 9 a.m. on July 15 with only a short delay for eastbound time freight No. 442, the first train over the new line.

Supervising personnel for the Great Northern on various phases of the relocation included H. J. Seyton, chief engineer, and G. V. Guerin, bridge engineer, both of St. Paul, Minn.; H. M. Goehring, assistant chief engineer, and R. W. Gustafson, assistant bridge engineer, both of Seattle; J. F. N. Gaynor, superintendent of electrical operation, Wenatchee; L. J. Gilmore, general roadmaster, Spokane, Wash.; and Henri Ferryman, division roadmaster, Seattle. C. F. Intlekofer, structural engineer, St. Paul, supervised the bridge erection work for the railway.

*An illustrated article describing the welding of the rail for the Cascade tunnel was published in *Railway Age* of July 9.



Left—Geneva Steel, served by the Union Pacific and Denver & Rio Grande Western, has an unusual setting for a steel mill. It is the West's largest steel plant, with a capacity of 1,284,300 net tons a year

Facing page (left)—Geneva Steel is ideally laid out. The storage bins of coal and iron ore are in the foreground. To the left and rear is the rolling mill area. To the right are two rotary dumpers for unloading inbound cars of coal and iron ore

Facing page (right)—At Geneva's new mine in Horse Canyon, long belt conveyors carry the coal to the tipples

Railroads Bring Everything to Geneva

West's largest steel mill is at apex of triangle for raw materials which are 100 per cent rail-borne

The largest steel plant in the West—United States Steel Corporation's Geneva—is peculiarly dependent upon good railroad transportation. Unlike the large steel plants of the East and Midwest, which are served in part by water transportation, Geneva receives 100 per cent of its inbound raw materials by rail. For this reason the selection of the plant's site and the design of its grounds and buildings were made only after close conferences between steel men and the officers of the two railroads which serve the plant.

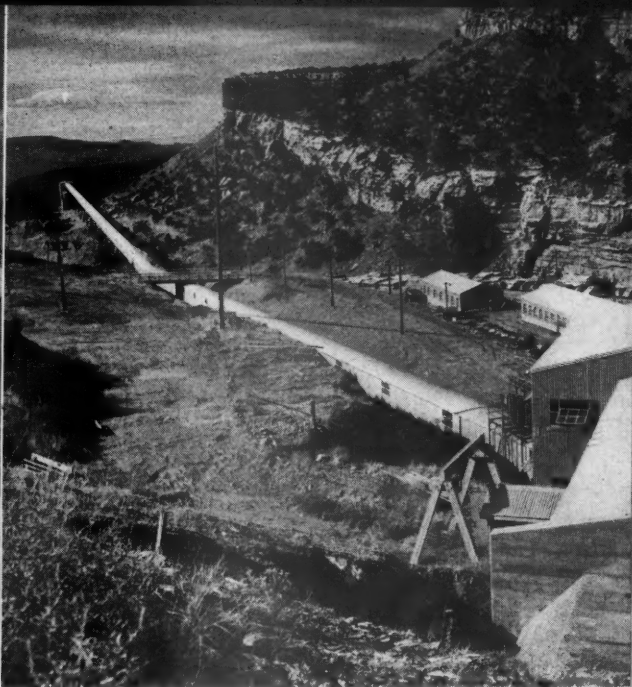
Geneva is 38 mi. south of Salt Lake City, Utah, and 7 mi. northwest of Provo. It lies in a fertile irrigated valley, on the shores of Utah Lake, at the base of the high snow-capped Wasatch mountains. While most steel mills lie in smoky valleys in crowded industrial districts of the East, at ocean ports, or along the Great Lakes, modern, "built-all-of-a-piece" Geneva is set among fruit orchards and truck farms. Just outside of its gates the single-track line of the Union Pacific is marked by cattle guards at each crossing, while nearby Bunker station comprises only a feed mill.

This striking incongruity of the site and character of the West's largest steel producer is but the outward sign of a problem in wholesale adaptation which has few parallels in business history. For a project of comparable novelty and complexity one must look to the founding of the Steel Corporation's great plant at Gary, Ind., in the early 1900's, where, in a few short years, a barren beach was turned into a complete steel-making plant with a whole new town to house its employees and

an entirely new main-line railroad built to bring in coal. Like Gary, Geneva was built only after the steel men and the railroaders talked over every possibility of plant location from points of view of ease of funneling in raw materials, adequacy of outlets to markets and, of course, the important question of rate levels and breaks.

Plant Linked with Railroading

Since, it is commonly said, every ton of iron requires, on the average, two tons of iron ore, one ton of coke and a half ton of limestone for its making, there had to be overcome—and quickly—the problem of adapting the two railroads which serve Geneva to the task of hauling in necessary raw materials to a plant producing some 800,000 net tons of finished and semi-finished steel in 1948. Although pig iron was first produced west of the Mississippi in Utah as early as 1852, and Columbia Steel Corporation (purchased by U. S. Steel in 1930) started to make pig iron at Provo commercially for West Coast steel plants in 1924, neither the Union Pacific nor the Denver & Rio Grande Western was accustomed to serving "big steel" in Utah until the Geneva plant was opened in 1943. Both the Rio Grande and the so-called "Utah Coal Route" (U. P. and Utah railway), it is true, have for many years hauled solid trains of coal from the Utah fields to Salt Lake City and the Northwest, and are well fitted for the heavy traffics around the copper mines and smelt-



ers in the Garfield district, but Geneva presented them, for the first time in Utah, with the task of engineering their properties and operations to cope with traffic of the magnitude and controlled regularity incident to a full-fledged steel-producing facility.

Geneva's story is, therefore, both a milepost and a saga in modern-day railroading — an outstanding example of the fact that the rail transport machine must continue to expand if the needs of commerce are to be met.

Short of Everything

The creators of Geneva Steel "started from scratch" at a period when *all* of the heavy goods necessary to equip a steel plant were in short supply—and particularly railroad facilities. In May, 1941, when war threatened the country, United States Steel, at the request of the federal government, submitted initial plans for the construction of a completely new, integrated government steel plant to back up the Pacific Coast shipbuilding program—to be located somewhere in the West. Because the site had to possess adequate railroad facilities, at minimum distances from sources of ore, coal, limestone and dolomite, with fresh water near at hand, Geneva—then an unimportant whistle stop on the Rio Grande—was chosen as the apex of a traffic triangle. Here the railroads which would supply the plant with nutriment intersected; from here easy access was had to rail routes to the Pacific Coast; and there was available plenty of relatively flat land so that a plant unhampered by physical barriers—a steelman's dream—could be laid out.

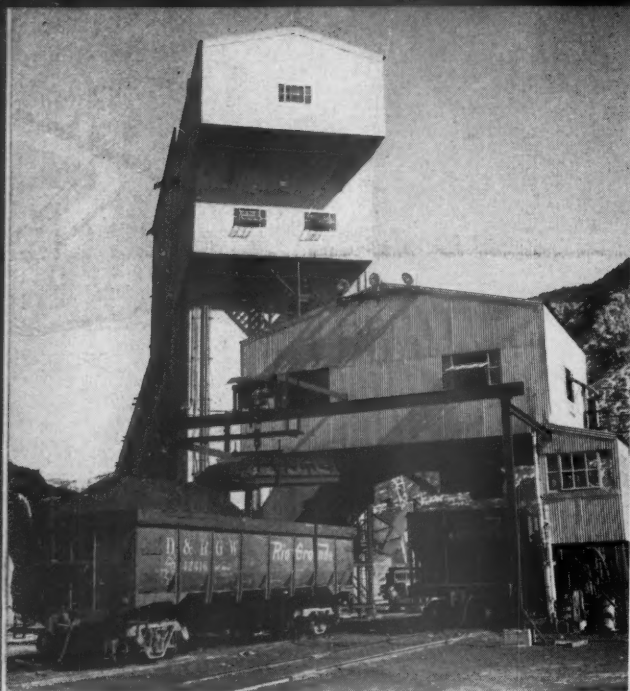
Built in record time, without charge or fee, by Columbia Steel, and upon its completion in 1943-44, operated for the government by Geneva Steel Company, a new U. S. Steel subsidiary, the new mill, producing chiefly plates and structural shapes for ships, included 252 by-product coke ovens, three 1,100-ton blast furnaces, nine 225-ton open hearth furnaces, a 45-in. slabbing and blooming mill, a 132-in. continuous plate mill, a 26-in. structural mill, and numerous complementary facilities. The scheduled capacity of the plant was

1,150,000 net tons of iron, 1,283,400 net tons of steel ingots, 700,000 tons of plates and 250,000 tons of structural shapes.

Even with government priorities, Geneva Steel had trouble getting almost everything it needed. For plant locomotives, for example, it had to "scour the country for anything that would pull cars," and wound up with a dozen 20 to 30 year-old steam locomotives of practically every make and description. They were lots of trouble to keep in repair, but served the plant until modern Diesels could be procured. They are now lined up for dismantling into scrap which will feed Geneva's own furnaces. The plant is now switched by 16 Diesel-electric units, 12 of which are 1,000-hp. Baldwins, and the remainder General Electric 80-tonners.

Similarly, the railroads serving the plant received the impact of the new traffic at a time when, as vital trans-continental routes, their own lines and rolling stock were overloaded with traffic of a quantity and type never before experienced in the West. The Carbon County railroad, for example, which taps Geneva's new coal mine at Horse Canyon, Utah, was forced to buy some 600 aged second-hand coal hoppers from "back East." Scheduled for retirement by their former owners, the relics were run until they'd run no longer. Their sides bulged; their plates buckled; they groaned and protested their heavy loads. The Rio Grande ran them in separate trains at restricted speeds, with continued and careful inspections en route. Their working days now over, these old cars are, one by one, being broken up to join Geneva's old locomotives in furnace charges; now, they too are raw material. In their place, the Carbon County has purchased 300 new 70-ton, all-steel, high-side hoppers, which may roll at speed.

Although the traffic which feeds Geneva is entirely bulk commodities, the railroads must give it carefully timed service to keep the coal, ore and limestone flowing into the plant in an orderly manner. Here transportation is essential—an integral part of the production process. Despite the fact that both the Union Pacific and the Rio Grande were greatly overstrained during the war, Geneva's management asserts that the plant was never slowed a single moment by failure of



the roads to deliver the goods. Both lines, somehow, acquired the additional power and cars to serve the plant; made line changes and additions to yards and sidings; and improved signaling and communication facilities to ready themselves for the increased load.

From April, 1944, to November 12, 1945, when the last of the war orders was completed, Geneva produced a total of 634,010 tons of plates and 140,706 tons of structural shapes and shell steel billets—all of which were shipped out by rail.

On June 19, 1946, Geneva was acquired from the government by United States Steel, and Geneva Steel company started at once the conversion and additions necessary to equip it for peacetime production. Chief of these was revision of the plate mill facilities to permit the rolling of slab-breakdowns in coils for shipment to the new cold reduction mills of Columbia Steel at Pittsburg, Cal., and Los Angeles, where they are converted into cold-rolled sheets and tinplate for the consumers-goods market. Hence, Geneva is now in a position to serve both durable goods and consumers goods industries. In addition, its coke ovens turn out a number of by-products, such as tar, ammonium sulphate, benzol and light oils, which are shipped out to widely scattered markets.

Availability of steel at Geneva is attracting a large number of important processors into the western states—some of them right in the immediate area. Typical of these newcomers is Chicago Bridge & Iron Co. (manufacturer of tanks and water towers), which has recently opened its first western fabricating plant at Salt Lake City.

Bringing Down the Ore

The map herewith shows the situation of Geneva Steel with respect to its sources of supply. Ore for its blast furnaces comes from the Columbia Iron Mining Company's mines at Iron Mountain, Utah, 252 mi. southwest of Geneva. About 100 cars of the rust red "guts of the steel business" are brought to Geneva daily by the Union Pacific. Iron Mountain also produces ore for Geneva Steel's Ironton plan at Provo

and substantial quantities for movement via Provo and the D. & R. G. W. across Utah and Colorado to the Colorado Fuel & Iron Co. at Minnequa, Col., in the Pueblo district.

Iron Mountain is at the end of a sub-branch of the Cedar City branch of the U. P., which strikes off south from the main line of the Utah division at Lund. The yard serving the mine was greatly enlarged and improved to handle the additional traffic for Geneva, and provides seven tracks on which to make up trains of cars which have been loaded at the tipple. Five additional yard tracks are provided a mile down the sub-branch at Wye.

One 1,000-hp. Diesel switcher is worked three shifts a day by crews which are brought over from their home terminal at Cedar City by bus.

From Iron Mountain to the junction with the Cedar City line at Iron Springs the road is laid with 90-lb. rail on crushed rock ballast. The grade descends almost continuously from 6,432 ft. elevation at Iron Mountain to 5,398 at Iron Springs. The maximum grade is 2.5 per cent and maximum curvature, 8 deg. From Iron Springs to Lund the ore trains make a much easier descent (maximum grade 0.50 per cent) over 90-lb. rail laid on Cruz gravel. The line is virtually tangent for the entire stretch. Once on the main stem at Lund, the trains enter on one of the longest continuous stretches of centralized traffic control in the world, extending 625 mi. from Salt Lake City to Daggett, Cal. The 35 mi. to the classification yard at Milford are on a mildly undulating profile, with no grade more severe than 0.3 per cent.

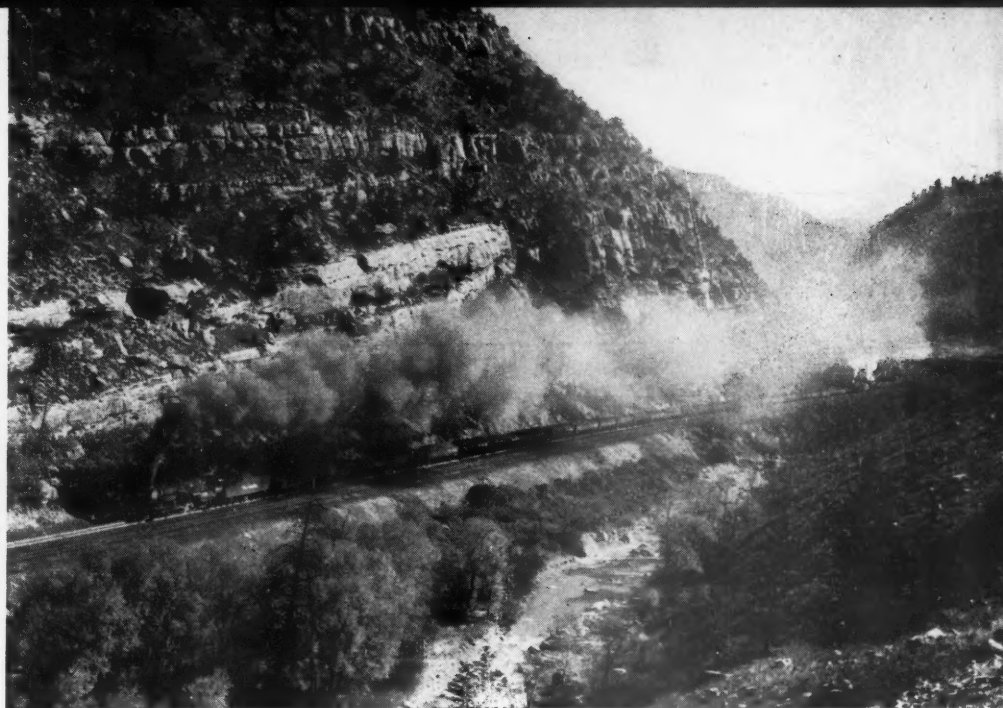
The ore is handled for the 71 mi. from Iron Mountain to Milford by crews working out of the latter point, who haul up to 90 empties to the mines and the same number of loads back down to Milford. Three-unit, 4,500-hp. Diesels generally are assigned to the job. No helper is used at any point. A round-trip generally takes from 10 to 12 hours.

From Milford east to Lynndyl the line is gently undulating, with the severest adverse grade a one per cent momentum rise, and with but light curvature. At Lynndyl the ore trains leave the main line to move

Facing page (left)—A modern tippie loads coal for Geneva

Facing page (right)—Interchange tracks at Columbia Junction, where the Carbon County turns the coal over to the Rio Grande

Right—A long coal train ascending the 2.6 per cent grade into Soldier Summit before Dieselization replaced steam locomotives at the head-end



over the Provo subdivision, the original main stem of the old Los Angeles & Salt Lake.

For the 38 mi. to Sharp the grade is generally adverse, with a one per cent maximum, and considerable curvature is encountered. For the remainder of the run to Provo the line is generally descending, with an 0.9 per cent maximum grade in favor of loaded movement. At Provo — where extensive additions were made at the time Geneva was opened — the ore trains may be broken up for destinations other than Geneva or kept intact for that point.

On the almost completely level five-mile stretch between Provo and Geneva loads and empties are moved by 3502-class simple articulated steam locomotives of the 2-8-8-0 type, which handle up to 150 cars. Their crews work back and forth in short turn-around service between Provo and Salt Lake City, handling ore into Geneva and finished products, coke oven by-products and empty ore cars out.

West from Provo empty ore cars may be run as full trains or used to fill out trains of mixed consist. In some cases they are moved in local service to Lynndyl and there added to main-line road trains. At Milford the empties are dropped off, assembled and run up to the mines by the Milford-Iron Mountain turns.

The complete round trip of 504 mi. between Iron Mountain and Geneva takes about 32 hr. running time. Complete turn-around time of cars in ore service averages 5½ days.

At Geneva, where only a limited storage space is provided, the ore cars are moved by plant switchers to Link-Belt rotary dumpers, where their contents are fed by conveyor into automatic mixing beds, which make it unnecessary to classify cars by grade of ore. To keep this mixing process going 24 hours a day, orderly, regular "on-time" receipt of inbound ore is a "must." The turn-around time of both ore and coal cars within the plant averages 1½ days.

The ore is handled principally in ordinary hopper cars of U. P. ownership. The cars are not necessarily assigned to this service and may be used for coal or for sugar beets and other seasonal products. Up to this year, the U. P. has, during the winter, when the Lake ore movement from Michigan and Minnesota

ranges is suspended, supplemented this equipment with as many as 500 special type ore cars leased from the Chicago & North Western. Since the latter are only 21 ft. long, they didn't fit the clamps on Geneva's rotary dumper, and had to be laboriously unloaded by hand, until plant personnel devised supplementary clamps made of old rails and bars so that two ore cars could be coupled and unloaded in one move.

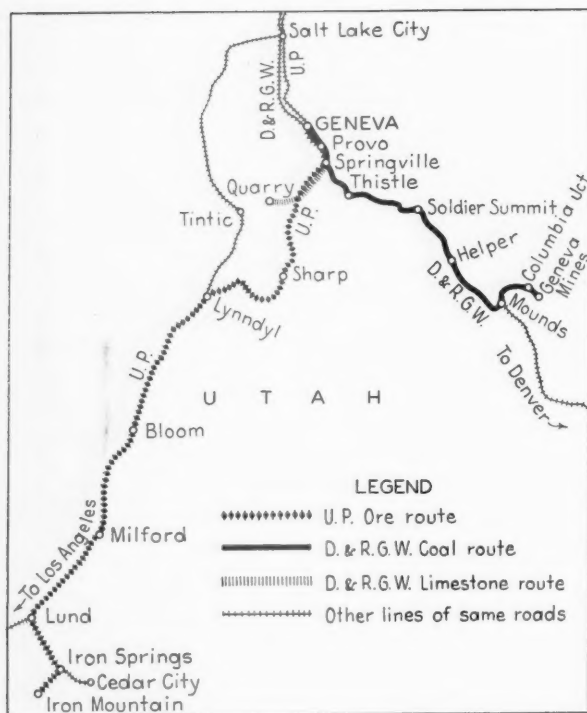
Black Diamonds Over the Mountains

Geneva consumes about 85 cars of coal a day (averaging 70 tons each), all except a fraction of which originate at Geneva, or Horse Canyon, Mine. They are moved 11 mi. over the Carbon County by 1,500-hp. road-switchers to Columbia Junction, 13 mi. from the main line of the D. & R. G. W. on the Sunnyside branch. Here the coal is turned over to the Rio Grande for road haul.

While Geneva's coal moves only 118 mi. over the Rio Grande from Columbia Junction, as compared with 252 mi. for the iron ore over the U. P., the former encounters far more severe grades and curvature, crossing as it does a major mountain range. To meet this special operating problem, the D. & R. G. W. has devised a standard routine of handling which seeks to maximize train loads.

The loads move generally downhill to the main line at Mounds. On this stretch 6,000-hp., four-unit Diesel-electrics handle up to 105 loads, aggregating 8,500 to 10,000 tons. At Mounds, tonnage is reduced to a maximum of 7,200 tons, or 80 cars, and is handled by the same locomotive up to Helper, a distance of 23 mi., over a maximum grade of one per cent.

At Helper (which is truly named) the real fight against gravity starts. Train tonnage is not reduced, and the Diesel which started out of Columbia Junction remains at the head end, but behind its authorized tonnage for the grade there is cut in a twin 6,000-hp. Diesel, and at the rear of the train there is coupled on, as a second helper, a simple articulated steam locomotive of the L-131 class, a 2-8-8-2 type, with 131,800 lb. tractive force — the heaviest steam power on the Rio Grande. Thus powered, the 80-odd loads move



Lines by which coal, ore and limestone are funneled into the Geneva plant

up the 2.4 per cent grade — the heaviest westbound main-line grade on the D. & R. G. W. — over the 25 mi. to Soldier Summit.

Thence west to Thistle, 29 mi., the grade is downward, generally two per cent. While there is no tonnage limitation, to obtain optimum utilization of the dynamic braking on the four-unit Diesel, coal trains may fill out at the summit only up to 90 cars. All retainers are set in "light" position, and no inspection stops are necessary. At Thistle, retainers are restored to normal and the coal train proceeds with the same locomotive through to Geneva without further stops, where it heads directly into the plant receiving track.

The road Diesel cuts off, sets its caboose over to a train of 100 to 120 empty hoppers and, after about an hour from the time it headed in with the loads (including brake test), moves out on the main line for a straight run of 82 mi. to Helper. Included in this run is a 29-mi. pull up the two per cent grade from Thistle to Soldier Summit, which is performed without additional power. At Helper, bad-order cars are switched out and repaired hoppers placed in the train, which proceeds with the same power to Columbia Junction, traversing the 1.76 per cent ruling grade on the branch without a helper.

The coal trains are handled between Helper and Columbia Junction by two crew turns daily out of the former point, known as DPC-1 and DPC-2 (after Defense Plant Corporation, which owned the mine originally). These runs are about 12 hours apart. As a rule, if DPC-1 brings full tonnage down to Mounds (where the train is reduced) DPC-2 will come down with a lighter train and fill out at Mounds with the cars left by DPC-1. Between Helper and Geneva, two

crews handle two turns every 24 hours. On occasion they may set out commercial coal for other points at Provo.

Typical of the time sequence of the Geneva coal runs is departure from Columbia Junction with loads at 2 p.m.; arrival at Helper at 4 p.m.; leaving Helper 8 p.m., arriving at Geneva 4 a.m.; leaving Geneva 5 a.m. and arriving back in Helper 10 a.m. Upon call, a turn works out of Helper to Columbia Junction, starting a new sequence.

Some 800 hopper cars are involved in the Geneva mine movement, of which 300 are new 70-ton units purchased by the Carbon County. The latter are equipped with a special type of brake-shoe key which does not "lose out" when the car is overturned in the unloader. Formerly, Geneva Steel experienced trouble with brake shoes and keys buried in its furnace charges and the railroad was plagued with bad-order cars. The new cars also have Lewis type "empty-and-load" brakes.

Because Utah coal is "just on the border line between coking and non-coking," Geneva uses, for blending purposes, a small proportion of a "caky" variety of coal from Oklahoma, which strengthens the coke structure. This is hauled by the Rio Grande in mixed consist trains from its eastern gateways at Pueblo and Denver.

The main line over which coal is hauled west of Mounds is laid, for the most part, with 131-lb. rail on slag ballast, with occasional stretches of 115-lb. From Mounds to Helper, the line is single track, equipped with C.T.C. Between Helper and Geneva two main tracks are provided, in part by pairing with the Utah railway. This stretch is equipped with automatic block signals throughout.

To ready the Sunnyside branch for its greatly increased load, the Rio Grande, in 1943 and 1944, spent about \$284,000. Projects included a change of line for a short distance near Mounds to reduce the grade against loaded movements from 0.70 per cent to 0.50 per cent, and against empty movements from 1.76 per cent to 1.33 per cent; a relocation at Columbia Junction which reduced the grade against empty movement from 2.54 per cent to 1.78 per cent; and construction of two new interchange tracks and a wye at the same point. In addition to this expenditure, the entire branch has been relaid with 90-lb. relay rail (to replace 85-lb. rail dating back to 1912 and 1913), and six inches of gravel ballast was put in between Mounds and Dragerton, one mile north of Columbia Junction.

To handle limestone loads and empties, to assemble empties for plant loading at Geneva, and to care for such set-outs of coal as might be made, the D. & R. G. W. enlarged its Provo yard, revamping the leads and putting in additional tracks. To handle all traffic in and out of Geneva (other than solid through coal trains), "tramp" assignments operate between Provo and Roper yard (Salt Lake City), 44 mi., moving empties into Geneva for loading, taking out finished products for movement north and west, and handling coal and limestone loads and empties.

Limestone and dolomite, which Geneva consumes at the rate of 15 to 20 cars a day, originate 33 mi. from the plant at Geneva Steel's Keighly quarry, near Payson, Utah, on the Tintic branch of the D. & R. G. W.

(Continued on page 88)

First Half's Capital Outlays Totaled \$711.7 Million

Were 26.7 per cent above those of same 1948 period, I.C.C. bureau reports; estimates indicate that expenditures in second half will be down about 17 per cent

Gross capital expenditures made by the 132 Class I line-haul railroads during this year's first half totaled \$711.7 million, an increase of \$150 million or 26.7 per cent above the \$561.7 million spent during last year's first half, according to figures presented by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission in the latest issue of its "Monthly Comment." The data included estimates of third and fourth quarter expenditures submitted by 128 of the 132 roads, and these estimates indicated that the total 1949 outlay will be \$1,297 million, an increase of 2.4 per cent above the 1948 total of \$1,265.9 million.

Actual and Estimated Gross Capital Expenditures—Class I Steam Railroads

Period	Number of roads	Road Thousands	Equipment Thousands	Total Thousands
Actual:				
1st half 1948	132	\$146,384	\$415,365	\$561,749
2nd half 1948	131	198,545	505,576	704,121
Year 1948	131	344,929	920,941	1,265,870
Actual:				
1st half 1949	132	160,227	551,520	711,747
Estimated:				
3rd quarter 1949	* 128	88,426	235,437	323,863
4th quarter 1949	* 128	76,252	185,000	261,252
2nd half 1949	128	164,678	420,437	585,115
Total: 1949 actual and estimated	—	324,905	971,957	1,296,862
Percent increase:				
1st half 1949 over 1st half 1948	—	9.5	32.8	26.7
2nd half 1949 (Est.) over 2nd half 1948	—	d 17.1	d 16.8	d 16.9
Year 1949 (actual and estimated) over 1948	—	d 5.8	5.5	2.4

*Estimates were not furnished by 4 roads for the 3rd and 4th quarters of 1949.

^dDecrease

These and other comparisons are shown in an accompanying table reproduced from the "Comment." "The most interesting feature of the table," the bureau said, "is the fact that the estimated gross capital expenditures for road and equipment combined for the second half of 1949 are about \$119 million under those of the same period in 1948. For both road and equipment the decline is about 17 per cent." For the year as a whole, however, the expenditures for equipment are expected to be up 5.5 per cent from 1948, while the outlays for road are expected to be down 5.8 per cent. The four roads which failed to submit estimates

for this year's third and fourth quarters made expenditures totaling \$18.7 million during the first half.

Distribution of Rate Increases

Another article in the "Comment" presented figures showing the distribution by commodity groups and regions of the general freight rate increases which have become effective since June 30, 1946. The over-all increase since that date was put at 57.3 per cent, the increases by territories being: Eastern district, 61.5 per cent; Pocahontas region, 53.1 per cent; Southern region, 58.1 per cent; Western district, 52.9 per cent. As also indicated by the table (reproduced from the "Comment"), the over-all increases by commodity groups ranged from 44.8 per cent for Products of Mines to 66.3 per cent for Less Carload Traffic.

The bureau pointed out that the estimates were based on the assumption that increases on intrastate traffic follow the same pattern as the interstate. "It should be emphasized," it also said, "that these percentages are over-all averages for the commodity groups and areas concerned and that the increases on specific movements of individual commodities within a group will vary widely on both sides of the figure shown for the group. Moreover, the percentages are more nearly

Estimated Average Percentage Increases in Freight Rates Authorized since June 30, 1946

Commodity Group	United States	Eastern district	Pocahontas region	Southern region	Western district
I Products of agriculture....	49.2	54.3	58.5	51.9	46.9
II Animals and products ..	60.1	65.9	69.2	62.4	54.9
III Products of mines	44.8	45.8	44.7	48.4	40.9
IV Products of forests	60.4	65.9	65.4	64.3	57.3
V & VI Manufactures and Miscellaneous, including forwarder traffic	64.3	71.6	71.3	63.0	57.5
VII Less carload traffic	66.3	73.9	74.2	64.4	57.9
Total, all commodities	56.7	61.5	53.1	58.1	52.5
Including effect of Western Trunk-line Zone 1 increase	57.3				52.9

*Does not include effect of extra authorizations for Western Trunk-line Zone 1, except as shown on the last line.

the effect of the rate increase authorizations on freight revenues (gross before adjustments for absorptions and corrections) within the various areas."

The bureau also reproduced in the "Comment" excerpts from that part of the commission's recent de-

cision in the Ex Parte 168 freight-rate case which dealt with the passenger service deficit. As noted in the *Railway Age* of August 20, page 55, that discussion by the commission interpreted available data as indicating that much of the so-called passenger deficit was attributable to the "head-end" transportation of "physical commodities or things" in mail, baggage and express services.

Shifts of Traffic

In another article the bureau presented a tabulation showing the percentage distribution of carload tonnage originated by Class I roads—by commodity groups and census areas. The figures, for the years 1940, 1947, and 1948, indicate regional shifts in traffic, tending, as the "Comment" said, "to confirm in a general way the shifts of traffic from Official Classification territory to the West and South, which were indicated by the estimates contained in this bureau's report on Regional Shifts in the Postwar Traffic of Class I Railways." (Statement No. 4622—see *Railway Age* of October 19, 1946, page 658, and November 16, 1946, page 851).

The census-group figures showed that, in terms of originated carload tonnage of all commodities, New England, the Middle Atlantic (New York, New Jersey and Pennsylvania), and the East North Central (Ohio, Indiana, Illinois, Michigan and Wisconsin) groups of states experienced decreases in 1948 under 1940 in the proportion of the total tonnage of the United States which was originated in those areas. In 1940 these three groups of states originated 46 per cent of the total carload tonnage, but their 1948 proportion was only 41.6 per cent, a relative decrease of 4.4 per cent. The decline in the Middle Atlantic area was most pronounced—3.1 per cent, or from 23 per cent to 19.9 per cent of the U. S. total.

All of the six other census groups of states in the South and West showed increases between the same two years, the largest gain (1.8 per cent, or from 6 to 7.8 per cent of the U. S. total) being reported for the West South Central group which includes Arkansas, Louisiana, Oklahoma and Texas. None of the other groups gained relatively as much as 1 per cent.

By individual commodity groups, the bureau noted, "the increases and decreases in the different territories are rather consistent with the over-all showing except for New England." Despite an over-all decline of 0.1 per cent in its proportion of the U. S. total, New England showed slight increases in 1948 over 1940 in three of the five major commodity groups—Products of Agriculture, Animals and Products, and Products of Forests. Meanwhile, the East North Central states lost ground in all five commodity groups, and the Middle Atlantic states in all except Animals and Products. In the South and West all six census groups increased their proportions in either three or four of the five commodity groups.

Dieselization and Heavier Rail

Data indicating in turn the decline in the number of steam locomotives on Class I line-haul roads and the progress made by those roads in replacing lighter rails with those of a heavier type in main-line tracks

are subjects of other discussions in the "Comment." The locomotive figures showed that the total number of steam units in service declined by 6,584 between January 1, 1943, and December 31, 1948. Meanwhile, the net increase in the number of Diesel-electrics in service was 6,397.

The weight-of-rail data showed that 53.36 per cent of the main track mileage had rail weighing 100 lb. or more per yard as of December 31, 1948. That compared with 40.33 per cent as of the close of 1939. The bureau called attention to the increase during the same period of 17,932 mi. of main track laid with rails weighing 110 to 114 lb. per yard, and to the increase of 14,836 mi. in the 130-to-139 lb. class. It also calculated that the average weight of rail per yard increased from 94.7 lb. in 1939 to 100.73 lb. in 1948. The figures showed further that the total main-line mileage decreased from 1939's 256,173 mi. to 249,049 in 1948.

RAILROADS BRING EVERYTHING

(Continued from page 86)

This branch joins the main line at Springville, 6 mi. south of Provo. The rock is handled from the quarry by local freight trains working out of Provo, or by special pick-up moves, and between Provo and Geneva is moved by the "tramp" assignments mentioned above. It is loaded in D. & R. G. W. or C. C. coal hoppers.

Rate Basis for Geneva

Under section 22 of the Interstate Commerce Act there was established during the war a rate for outbound products of the Geneva mill to Pacific Coast destinations of 40 cents per 100 lb., compared with the "normal" commercial rate, at the time, of 60 cents. When U. S. Steel took over on a peacetime basis, one of the conditions of its ability to compete on the coast with local steel and that shipped from the East via the Panama Canal was a continuation of this rate.

Effective April 1, 1947, following protest and a short suspension by the Interstate Commerce Commission, the D. & R. G. W., Union Pacific, Western Pacific and Great Northern put in a commodity rate on finished products of 48 cents (the old government rate plus the nationwide general rate increase), subject to a minimum of 80,000 lb., applicable to Los Angeles (which takes a substantial portion of Geneva's production), San Francisco and Stockton, Cal., and Portland, Ore., and 54 cents to Seattle, Wash. These rates are, currently, 58 cents and 65 cents, respectively. Discussed editorially in the *Railway Age* of January 25, 1947, as "The Geneva Experiment," these rates have been attacked by virtually every other producer of steel in the country, on grounds that they are: (1) too low; (2) discriminatory; and (3) burdensome on other traffic. Final decision of the I.C.C. is still pending.

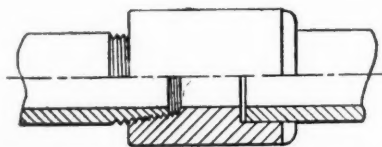
New and Improved Products of the Manufacturers

AIR-BRAKE-PIPING WELDING FLANGE

The Watson-Stillman forged-steel socket welding flange for use on AB brake systems was developed after careful study and discussion with many railroad air-brake engineers to eliminate brake-pipe failure due to breakage and leaks. This flange, which already has been approved by the Association of American Railroads, retains the facing dimensions and groove for the rubber gasket that permits simple and speedy interchange of all component parts in the present AB system. The improvement in the flange is in the manner in which the pipe is joined to it.

The flange is provided with a socket or counterbore that slips over the end of the pipe and is then welded on the outside of the pipe to the face of the flange with a standard fillet weld. The particular advantage claimed for the socket weld is this clean outside-the-pipe fillet weld that eliminates inside-the-pipe welding bead, slag debris, or icicles. There is no need for a backing ring, with the result that a clean streamline internal passage is assured.

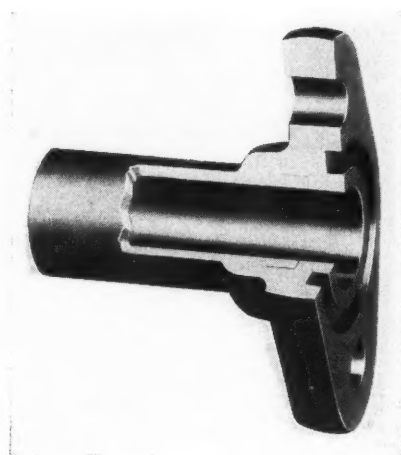
Assembly is simple and fast—merely cut the pipe, insert in the fitting socket and weld. The deep socket holds and aligns the pipe and also eliminates



A combination threaded and welded end coupling

the necessity of cutting pipe to exact length, providing ample come-and-go. The finished assembly is a permanently tight leak-proof joint, with the result that failures in air-brake piping can be reduced to a minimum.

With the development of this welding flange it is now possible to have a completely welded air-brake pipe system. For connecting two lengths of pipe to-



Watson-Stillman forged-steel socket welding flange

gether a socket welding coupling is used. In addition, there is the combination screwed and socket welding coupling for use on the end of the brake pipe, as illustrated.

There often are many places where other types of socket welding fittings can be used, such as 45- or 90-deg. elbows or tees. All of these fittings are provided with the same type of socket or counterbore that slips over the end of the pipe in the same manner as the flange.

Early in the development of welded-pipe systems a serious need was felt for a simple and dependable type of weld suitable for small diameter piping (3 in. and under). Socket welding proved to be the best answer to this problem. Pipe fittings of this type first were offered on the commercial market about 1934. As early as 1928 the United States Navy had experimented with this type of weld, searching for a pipe joint which would resist breakage or leakage due to shock and vibration. They are now used by the Navy in great quantities. Navy specifications have been set forth on Bureau of Ships drawing 3-S-530. For general industry the specifications for socket-welding fittings have been standardized under the American Standards Association Specification E26.11.

The chief concern of the various specifications is with the socket wall thick-

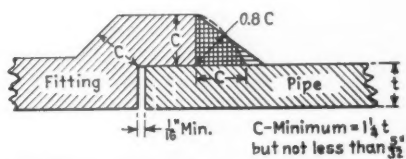
ness. They require that the socket wall be a minimum of 1-1/4 times the pipe wall thickness. This proportion provides a throat dimension in the weld at least equal to the pipe wall thickness. The intent of this provision is to insure having the fillet weld as strong as the pipe. It is actually stronger than the pipe.

Sabin Crocker, senior engineer, engineering division, of the Detroit Edison Company, and the author of *The Piping Handbook*, says: "Numerous tests* have demonstrated that the strength of socket welds having an area of throat at least equal to the area of pipe wall surpasses that of the pipe both under bursting pressure and under combined tensile and shear tests. Hence, the design of the fillet weld covered in the standard is deemed amply strong, particularly so within the range of 3/8-in. to 3-in. nominal pipe sizes."

All the pipe fittings proposed herein are of forged-carbon steel, conforming to the requirements of A.S.T.M. Specification A-234 and A.S.T.M. A-105 Grade II.

	Minimum
Tensile strength, lb. per sq. in.	70,000
Yield point, lb. per sq. in.	36,000
Elongation in 2 in., per cent	22
Reduction of area, per cent	30

These fittings are manufactured by the Watson-Stillman Company, Distributor Products division, Roselle, N. J. The



Minimum dimensions for the socket-and-fillet weld for welding pipe fittings

steel is especially selected for its welding qualities in conjunction with pipe. All fittings are machined from solid-steel drop forgings.

*See "Application of Welding for Piping and Pipe Fittings," Bureau of Construction and Repair, U.S. Navy Technical Bulletin No. 7-29, October, 1929, and "Investigation of Gas and Arc Fillet Welds in Piping," by Irving H. Carlson and Eric R. Seabloom, before the American Welding Society, October, 1940.

P.R.R. Mechanizes Freight Offices

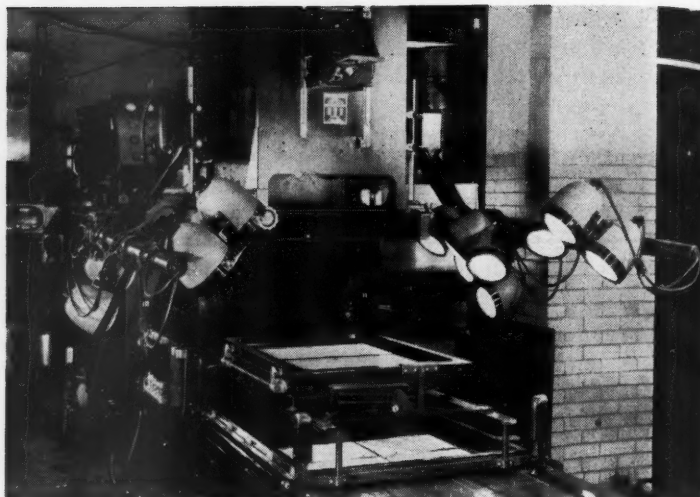
All station accounting work to be concentrated at a few agencies — Freight bills prepared mechanically while tabulating equipment does station accounting

Many advantages, including cost reductions, have resulted from the Pennsylvania's mechanization of clerical work at its Philadelphia consolidated freight office. Some years ago this road began moving less-carload freight on the shipping order, prepared as a copy of the bill of lading, with the necessary origin railroad records placed on microfilm. Such procedure necessarily was confined to traffic to on-line points, but the coming of the harmonized bill of lading, with two additional copies for railroad use, paved the way for freight, both carload and l.c.l., to move to off-line destinations without additional paper work.

There was still, however, the problem of preparing a prepaid freight bill at origin stations when consignees are on the accommodation list, and, in most cases, the freight bill at destination. This situation has been met through the use of the Photostat machine, either to prepare the freight bills themselves or to prepare a translucent document which in turn is passed through a Bruning black-and-white printer-developer which, by light penetration, transfers the information on the documents to sensitized paper. Experiments with the use of tabulating machines to do station accounting work, with one central station office doing the work for many agencies, have proved successful. Under present plans a limited number of these reporting stations will do most of the agency accounting work for the whole Pennsylvania system.

Prepaid freight bills are made on the Photostat machine by placing two masks over the shipping order which is being photographed. One mask at the top reads "prepaid freight bill" and the other, at the bottom, shows the amount of the freight charges, tax and the customary "received payment" endorsement of an agent of the company. In the preparation of prepaid freight bills, eight shipping orders are placed on a mechanical subject-holder and one exposure is made of the eight bills. While one tray of documents is being filmed another eight forms are being laid up to be moved into the exposure area of the camera.

A variable exposure time is, of course, essential, according to the density of the impressions on the paper and the color and quality of the paper. A good operator soon learns to estimate the proper exposure, and the time required averages 15 seconds. The machine is designed so that one sheet may go through it



FREIGHT BILL					
FOR CHARGES ON ARTICLES TRANSPORTED					
BILL CHECK PAYABLE TO THE PENNSYLVANIA RAILROAD COMPANY					
Freight Bill No.		APR 16 1949		194	
53 23 30		DATE		4 12 49	
WAB 84730		STATION		6611	
BROAD & WASH AVE PHILA PA		STATION		2239 DEVAULT PENNA	
52ND ST		FULL NAME OF SHIPPER AND FOR C.O.D. SHIPMENTS, THE STREET AND P.O. BOX ADDRESS AND PHONE NUMBER IF AVAILABLE		JOHN DOE CO INC	
JANE DOE CO		WEIGHT AGREEMENT		AT	
TAX		TAX		TAX	
LIME SLAC NO RECOURSE		S 60000		164NT 4920	
				EC 6 295	
				5215	
				TAX TOTAL	
Received payment for the Company,		194		Amount to be Paid	
Freight Agent		THE PENNSYLVANIA RAILROAD			

every 39 seconds, thus producing 92 sheets of 8 bills each per hour, or a total of 736 documents. More than 5,000 bills are being processed by one operator in an 8-hour trick. This has resulted in a reduction of almost 50 per cent in the gross cost of preparing each bill, compared to older transcribing methods.

The chemicals used for developing and fixing the exposed sheets are mixed in stainless steel tanks and allowed to flow to the machines through a plastic hose. The fluids are forced through the processing

Facing page (left)—The Photostat machine with bills on the holder. Facing page (below)—Freight bill produced by the Photostat machine. Right—The Bruning black and white printer-developer



tanks of the machine by a roto-meter. The sheets which come from the dryer portion of the machine, seven minutes after the exposure is made, are not cut down into individual bills until processing is completed.

The preparation of freight bills from the copy of the waybill made by the Photostat machine on translucent paper is accomplished by passing each translucent document through the Bruning black-and-white printer-developer as many times as there are copies required. The translucent document returns to the operator standing in front of the machine and the completed copy on sensitized paper moves through the machine and comes out at the rear fully developed and ready for use. A good operator can produce 2,000 copies of bills per hour.

The advantage of both types of preparation of freight bills is easily recognized, for there is no opportunity for any mistake in typing or copying the information by hand. In addition, this system has enabled the railroad to make a substantial reduction in the cost of billing.

Encouraged by the success obtained in the mechanical preparation of freight bills, the Pennsylvania turned its attention to station accounting operations, looking for further simplifications and cost reductions. Since the accounting department has been using punch cards and tabulating equipment for years, and—since documents made in doing the basic station accounting work are fundamental to the work of the auditor of freight traffic, it seemed logical that, if possible, tabulating equipment should be used to perform station accounting work.

Pennsylvania agents always have been required to establish the amount chargeable for their stations, daily, by inserting pertinent information on a simplified report to the auditor of freight traffic, including the amount of charges due. A station balance is made daily of the amount on ledger statements which accompany bills to credit customers, cash bills on hand and cash collections made. The reports to the auditor and the ledger statements were made at the same time by carbon copy, with all balancing operations required and separate totaling of the individual accounts and bills involved.

Now, upon receipt of the waybill the agent cuts a card showing all pertinent information such as origin station, route, waybill number and date, weight, charges, and commodity index number. Once these cards are punched the tabulating machines take over, listing data on continuous form sheets. The machines prepare the reports to the auditor, the report of waybills received (separated by consignees in order to make ledger statements), the ledger statements which accompany bills to the patrons, statement of allowance payments to the patrons under the pick-up and delivery tariff and, in short, any kind of statement and total required for any or all of the information cut into cards at the time of their original preparation.

With the former procedure, traffic representatives in origin and destination territories receive copies of all waybills or freight bills covering carload traffic and, of course, in the past the auditor of freight traffic has had to punch into cards the information he requires from the station agent. Under the new plan, the agents will cut the cards showing information required by all departments, and reproducing punches will make duplicates for the use of the traffic and accounting departments. Among these reports for the traffic department are separate ones for traffic originated on the P.R.R. and for business coming from foreign lines.

In order to get full utilization of all tabulating equipment installed, the plan provides for continuance of consolidation of the preparation of waybills and freight bills at certain large stations, strategically located. The Philadelphia consolidated freight office, for example, is now handling the accounting work of stations between New York and Washington, and between Philadelphia and Altoona. These reporting offices, as they are called, will establish the amount chargeable to other stations and transfer the totals on an advances-only waybill. The destination agency will accept this and must balance collections and bills on hand against the amount of the chargeable so computed.

Based on the original experiment and work at the Philadelphia consolidated freight office, indications are that the out-of-pocket cost of performing station accounting work may be decreased by as much as 30 per cent by this application of mechanized processes.

GENERAL NEWS

Transport Study Being Made For President

Secretary of Commerce asked to submit report by December 1

President Truman has asked Secretary of Commerce Sawyer to make a survey of the government's transportation policies and programs with a view to rendering by December 1 "a report outlining the major policy issues which need to be resolved at this time in order to achieve maximum effectiveness and consistency of federal programs in the transportation field." The President made the request in an August 30 letter to Mr. Sawyer which was made public at the White House this week.

At the same time, Mr. Truman sent like letters to various other federal agencies asking them to cooperate in the survey. Among those receiving such letters were the Interstate Commerce Commission and the Civil Aeronautics Board.

"I have for some time been concerned about the need for greater coordination of federal policies and programs relating to transportation," the President told Secretary Sawyer. "The transportation industry directly affects the economic well-being of the nation as a whole. Its services enter into almost all of our national output; it plays an important part in the cultural and social unity of our nation; it is vital to our national military preparedness.

Basic Facilities Involved

"To help assure the availability of necessary transportation services, the federal government has undertaken various responsibilities for regulating and promoting this industry. It also provides, either directly or indirectly, such basic facilities as roads, airports, river and harbor improvements and navigation aids. Federal expenditures for all of these purposes now approximate \$1,500,000,000 per year.

"At the present time these various federal programs are administered by a number of agencies, each concerned with a limited sector of the over-all transportation industry. A unified and coordinated federal program for transportation is clearly essential in order to assure maximum benefits from the government's activities in this field. In a broader sense, such a program is necessary to assure the public the most efficient and economical transportation service."

Then came the request for the study and report by December 1, as noted above. This would be the "first step"

toward the coordination he has in mind, the President said. He added that he plans to use the report "as a basis for discussion of these problems with the various agencies concerned with transportation." He also asked for Secretary Sawyer's views "on the possible desirability of having the Commerce Department conduct, on a continuing basis, broad studies relating to federal transportation policies and programs." The President suggested that the Secretary include in his consideration of that matter a discussion of it with the director of the Bureau of the Budget, "with a view to developing specific plans for my consideration."

Procedures Discussed

Representatives of the agencies to be covered by the survey met with Secretary Sawyer last week. It is understood that the meeting was devoted mainly to a discussion of procedures. While there was no reference in the President's letter to recommendations of the Commission on Organization of the Executive Branch of the Government (the so-called Hoover Commission), it has been suggested that the report to be made by Secretary Sawyer might be used by Mr. Truman in connection with his consideration of those recommendations.

In its report on the Commerce Department, the Hoover Commission recommended a grouping in that department of all major transportation activities of the government, except the regulatory functions of the independent commissions. Adoption of these recommendations would result in a transfer to the Commerce Department of such I.C.C. functions as those relating to the formulation of railroad consolidation plans, car service, and safety. In other reports, the commission recommended "immediate liquidation" of the government-owned Inland Waterways Corporation, operator of the Federal Barge Lines; and transfer of the rivers and harbors and flood control activities of the Army's Corps of Engineers to the Department of the Interior. As to the Railroad Retirement Board, National Mediation Board, and National Railroad Adjustment Board, there were no Hoover-Commission recommendations calling for any change in their present status.

One Recommendation Followed

Meanwhile, the President has carried out one of the commission's transport recommendations by transferring the former Public Roads Administration to the Commerce Department, where it has become the Bureau of Public Roads. Also, the recently enacted Federal Property

and Administrative Services Act set up the General Services Administration which has taken over various "house-keeping," procurement, and other government activities, including those relating to the purchase of transportation services.

Missouri Pacific At Standstill

Union officers study proposal for compromise settlement

The 7,200-mi. Missouri Pacific dumped fires on 600 steam locomotives and bedded-down 115 Diesel-electrics shortly after 2 p.m., Central standard time, Friday, September 9, as striking engine and train service employees withdrew from service on all but the subsidiary International-Great Northern and Gulf Coast Lines in Texas and Louisiana. The strike was called by the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen, the Order of Railway Conductors and the Brotherhood of Railroad Trainmen, representing approximately 5,000 operating employees on the M. P. Affected also were about 20,000 non-operating employees, for whom no function exists so long as the movement of trains is prevented. A skeleton force of about 2,000 is being retained on essential positions.

Various Methods Proposed

As this issue of *Railway Age* goes to press, leaders of the striking unions were studying a proposal submitted by the Missouri Pacific on September 14 wherein 59 of a total of 282 disputed cases would be settled, some by outright payments, some subject to further investigation, and others on the basis of "no precedent." In the company's proposal, the unions are asked to submit a list of cases which they would be willing to withdraw, the number of which they have intimated to be 80. The remaining cases would be handled to conclusion through any of five means provided by the Railway Labor Act. Upon accord upon the procedure outlined in the proposal the brotherhoods would immediately terminate the strike.

The four brotherhoods, having repeatedly declined the Missouri Pacific's offers of arbitration, and rejected a presidential emergency board's recommendation that the cases in dispute be submitted to the National Railroad Adjustment Board (see *Railway Age* of September 10, page 75,

and August 13, page 75), have attracted unfavorable attention from the press. A St. Louis Post-Dispatch editorial of September 12 hints that the then three-day old strike "no matter how unintentionally, has the effect of 'the public be damned.'" The Post-Dispatch editorial appears to sum up the consensus of public opinion in the area affected, where considerable unemployment has already been created outside the railroad, and more widespread layoffs are imminent if the strike is prolonged at all.

Citizens' Committee Formed

A voluntary citizens' committee, headed by E. E. Hilbert, professor of constitutional law at Washington University, St. Louis, met at the Jefferson Hotel on Monday afternoon, September 12, with the Missouri Pacific's trustee, Guy A. Thompson, and chief executive, Paul J. Neff, and representatives of the four striking unions in an attempt to open the first post-strike negotiations leading toward settlement. The committee, made up of civic leaders in the St. Louis area, was advised by Trustee Thompson that he would be agreeable to meet with the representatives of the employees for the purpose of resuming negotiations, "provided however, (a) that when said negotiations are resumed, the first matter to be considered and to be agreed upon, before any of said 282 claims are considered, shall be the method or means by which shall be finally settled and disposed of, such of said claims as may not be disposed of by further negotiation, and

(b) that when and as soon as said agreement is made, the strike shall be terminated and the negotiations in an effort to dispose of all or as many of said 282 claims as possible shall proceed earnestly, expeditiously and in good faith."

The union leaders handed the committee a reply reading that "We have given careful consideration to Mr. Thompson's letter addressed to the Citizens' Committee and have decided that we are unable to agree with that portion of the letter beginning with 'provided, however,' and the remainder of such letter." In any case, the outcome of the meeting was accord that the two parties would meet again for further discussion.

The 282 cases about which the strike evolved grew out of failure to agree on the interpretation of working agreements. The union has estimated that complete settlement would cost the Missouri Pacific \$3,000,000, without taking into account the increased operating costs which would accrue as a result of precedents which would be set by agreement to the unions' interpretations. The St. Louis Globe-Democrat quotes R. E. Davidson, assistant grand chief engineer for the B. of L.E., as stating that "We offered once to drop the 80 (of 282) claims in an effort to reach a settlement . . . and we stand by that offer, although we have had no counter proposal." With respect to this alleged offer, the St. Louis Post-Dispatch quotes Mr. Neff as stating that it is "ridiculous to think that the railroad would reject such an offer."

Due to a "misunderstanding" during

the early stages of the strike, M.P. employee pickets halted St. Louis Southwestern freight and passenger trains at Valley Junction (East St. Louis), Ill., where that road's trains operate over M.P. trackage. After 24 hours, this situation was clarified and Cotton Belt trains were allowed to proceed unmolested, although union representatives watched carefully to ascertain that no Missouri Pacific equipment which would ordinarily move by the home road was being handled in trains of other roads.

Alton & Southern traffic for interchange with the St. Louis-San Francisco normally moves via the Missouri Pacific's Ewing yard. Following the strike, interchange was attempted direct with the Frisco over the tracks of the Terminal Railroad Association of St. Louis, but union officers instructed A. & S. crews not to handle such traffic.

Approves More Experimentation With "Promotional" Air Fares

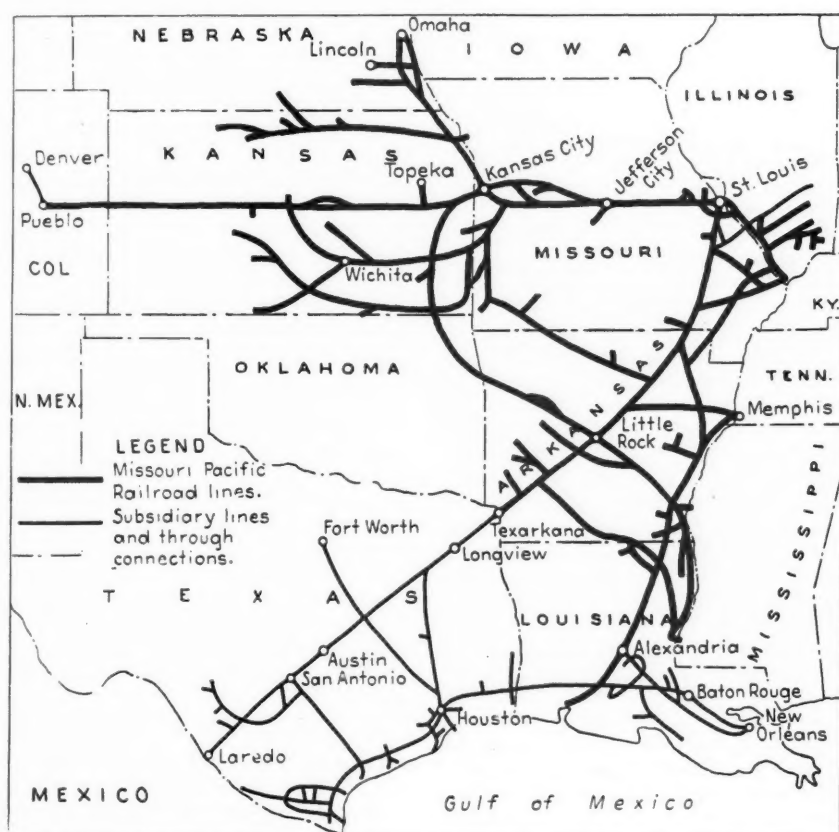
Domestic certificated air lines will be permitted by the Civil Aeronautics Board to continue for another nine months their "promotional" fares of the "coach type," "family plan," and "no-meal" variety. The board so advised the carriers in a recent statement of policy which was issued in anticipation of the expiration on September 30 of the tariffs involved.

While the board did not give assurance that all promotional fares now in effect would be extended, it offered to approve tariffs extending for another nine months (until June 30, 1950) those of the above-mentioned types of experimental rates and services which have demonstrated their feasibility and indicated ability to augment air line revenues.

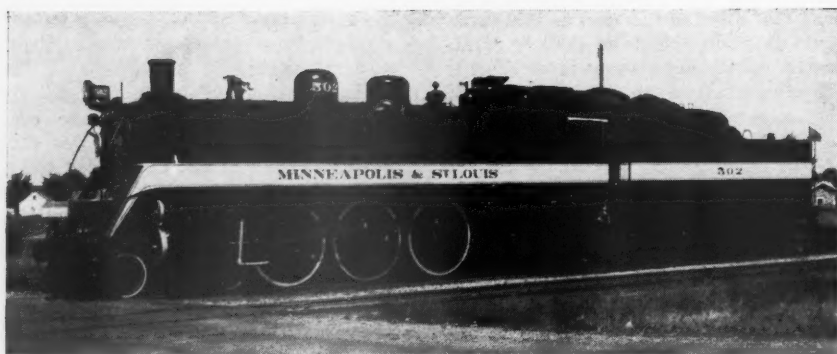
Create New Business

The "coach-type" fares, as the board pointed out, are typically at a level of approximately 4 cents per mile; and they apply on specific "coach" flights during off-peak periods. Results thus far indicate that "under certain conditions," these fares "generate a substantial quantity of new air travel which can be profitably carried" by the air lines, the board said. It added that "special conditions" which appear to require consideration in evaluating air-coach operations are: "(a) That the operation be conducted over routes having a heavy flow of traffic; (b) that high density equipment (equipment having more than the average number of seats) be used; (c) that the service be scheduled so as to minimize the diversion of traffic from regular flights; (d) that all non-essential services to the passenger be eliminated, such as meals, extra stewardesses, full reservations procedures, etc."

The board proceeded to appraise various "coach" services now in effect, or proposed, in the light of these considerations. There it indicated which of such services would be approved for continuance. "In general," it said, "we have



The Missouri Pacific system



Minneapolis & St. Louis 4-6-2 type coal-burning steam locomotive No. 502, as exhibited at the Chicago Railroad Fair, where September 15 was "Minneapolis & St. Louis Railway Day." One of the few steam power units still in service on the heavily Dieselized M. & St. L., the 502 was one of six identical locomotives designed and built in 1921 by the American Locomotive Company. It was used principally on the "North Star Limited," between Minneapolis and St. Louis, until that train was discontinued about a dozen years ago, and is now used mainly on inspection and other special trains

serious doubts whether coach services can be successfully operated with conventional DC-3 type aircraft having only 21 or 24 seats. The data which we have indicates that before such an operation can be successful, it must attain a load factor in excess of 85 per cent which, over any extended period, is probably above what can be obtained." Also, the board expressed its determination to prevent "coach" fares from undermining the basic air-line fare structure.

"There is," it said, "little indication that the air line industry is in a position to enter the air coach business on a broad and indiscriminate basis. Despite the favorable trend in air line costs and the recent upturn in air line earnings, the present economic position of the certificated carriers appears to demand the continuation of existing fare levels for the great bulk of passenger air travel. . . . We would caution the carriers that the burden of proof for the establishment of additional coach service is clearly upon them. We do not propose to allow the indiscriminate extension of coach fares nor do we intend to permit a general debasement of the existing passenger fare level."

Family-Fare Plan "Successful"

As to the "family-fare" plan, the board explained that this is an arrangement under which members of a family may travel by air at a reduction (usually 50 per cent) from the regular fare if traveling with the head of the family on "off-peak days of the week." The board found that the plan "appears to have been successful in building up traffic"; and it is "inclined to look with favor" upon its continuation. It is not, however, prepared to approve, "as some carriers have proposed," a family plan which would be applicable to all days of the week.

The so-called "no-meal" tariffs publish a reduction of about 5 per cent under the regular fare. These, too, the board is prepared to extend for another nine months. As to various other types

of "promotional" fares, such as "special educational fares," and discounts for persons traveling together in a group, the board will authorize their extension for only four months, or until January 31, 1950.

RR Fair Attendance May Set New Record

As of September 12, with 20 days yet to go, the Railroad Fair in Chicago had attracted 2,179,144 paid admissions, leaving but 321,669 customers needed to equal last year's record of 2,500,813. An earlier single day attendance record was broken on September 4, when 52,728 persons visited the mile-long area packed with exhibits and special entertainment features. The most popular individual attraction has continued to be the "Wheels-A-Rolling" pageant, which had been seen by 1,152,233 customers as of September 12.

In answer to inquiries from all parts of the country about the possibility of the Fair continuing for another year, Major Lenox R. Lohr, president of the exposition, has announced that the show will close forever on October 2. He said that the many historical trains, automobiles and horse-drawn vehicles at the Fair will be returned to museums and storehouses throughout the nation, probably never to be assembled in one place again. The 5,000,000 visitors which the spectacle will have attracted by its closing date is said to be the greatest recorded attendance for any single industrial exposition.

The Railroad Fair has already set a new all-time attendance record for the repeat performance of any large-scale exposition. A Century of Progress held in Chicago in 1933-34 and the New York World's Fair in 1939-40 both attracted slightly less than 75 per cent of their first year's gate, while the Fair is fast approaching the equal to its 1948 patronage. Spot checks of attendance this summer have shown that approximately 59

per cent of the visitors are from areas outside a 100-mi. radius of Chicago, and that they have come from all 48 states, Canada, Mexico, Argentina, Japan, India, England, France, Sweden, Norway, Denmark, Australia and Egypt.

Meanwhile, a move is underway in Chicago for preservation of the fairgrounds and its many improvements as a permanent site for fairs, expositions and trade shows. The railroads spent some \$2,000,000 for buildings and betterments, all of which must be removed unless the grounds are taken over by the city or private industry.

U.P. Would Drop Train-Stop, Speed-Control, on Oregon Line

The Union Pacific has filed with the Interstate Commerce Commission a petition for authority to remove the train-stop and speed-control features of the automatic train control system in service on its 83-mi. line between Portland, Ore., and The Dalles. If the authority is granted, the U.P. proposes to make some modifications of the line's wayside signals and add audible cab signals to the visual cab signals with which locomotives operating in the territory are already equipped.

The relief is sought, according to the petition, because the present pneumatic train-control equipment has been in service 23 years and has become "obsolete." It is thus "difficult" to secure parts for the apparatus, "due to the fact that the supplier has discontinued manufacturing them, except by hand method, for the relatively few installations still in service throughout the country." This situation causes delay in securing parts and makes it "difficult and expensive" to keep the pneumatic system in proper working condition, the petition added.

The equipment is of the continuous inductive type which was manufactured by the Union Switch & Signal Co. It was installed pursuant to the commission's order of December 26, 1923. The automatic block signals in the territory are of the two-indication and three-indication color-light types, using an overlap system of control. The cab signals are of the two-indication type.

The U.P. proposes to change the latter to three-indication and supplement them with audible signals, as noted above. It proposes to relocate the wayside signals to provide "adequate stopping distances," and to change them to four-indication signals, using the ab-

Woodruff To Be Erie Chairman; P. W. Johnston New President

Paul W. Johnston, executive vice-president of the Erie at Cleveland, Ohio, will assume the presidency of that road on October 1, succeeding Robert E. Woodruff, who will become chairman of the board.

solite permissive block system of controls. To the extent that any added protection in the territory is justified, it will be "fully supplied" by the proposed new set-up, the petition argued.

Meanwhile, it had stated that "much the larger porportion" of the total expenditures for maintenance and operation of the present locomotive equipment is incurred in connection with the train-stop and speed-control devices, as distinguished from the cab signals. The road's new Diesel-electric locomotives are not equipped with the train-stop and speed-control devices, and thus cannot be operated on through freight trains over the 83-mi. line. Also, the petition pointed out that the runs of all steam locomotives assigned to the territory extend beyond the automatic-train-control area; and this necessitates maintenance of the device "on numerous steam locomotives which operate mainly or largely in non-equipped territory."

Its "considered judgment," after "years of experience," the U. P. also told the commission, is that the added measure of safety contributed by the train-control system is "negligible." It added that "certainly, these devices require expenditures, both direct and indirect, that are out of all proportion to the benefit which may be derived from them in the way of increased safety."

Apportions Highway Funds For 1951 Fiscal Year

Sums apportioned to the states from the \$450 million fund authorized by the Federal-Aid Highway Act of 1948 for the fiscal year ending June 30, 1951, were announced on September 11 by Secretary of Commerce Sawyer. The Bureau of Public Roads is now part of the Department of Commerce, having been transferred there under an Executive Order of President Truman's which recently became effective.

The Sawyer announcement noted that the apportionment "normally" would not be made until December, and went on to explain that it was made at this time "at the request of several states desiring to initiate urgently needed improvements." The apportionments include separate allotments for the so-called federal-aid primary system, for secondary or feeder roads, and for urban highways. The states are required to match the federal funds.

The apportionments for the primary system range from \$12,683,893 for Texas to \$974,531 which was allotted to each of four states (Delaware, New Hampshire, Rhode Island and Vermont) and to Hawaii and the District of Columbia. While second to Texas in the amount apportioned to it for primary roads (\$9,621,543), New York got the largest total apportionment for all three classes of highways involved—\$30,096,167 as compared with Texas' \$25,583,720.

Secretary Sawyer's statement called attention to the fact that formal apportionment includes a stipulation to the effect

that "the sum apportioned to any state shall be subject to such reduction, if any, as the Secretary of Commerce may find is required by reason of diversion of road user revenues (gasoline taxes, registration fees, etc.) in violation of section 12 of the Hayden-Cartwright Act of 1934." The purpose of the cited section, the statement explained, "was to prevent any increase above the 1934 rate of assignment of road-user revenues to non-highway purposes."

August Employment

Railroad employment decreased 0.5 per cent—from 1,208,268 to 1,202,185—from mid-July to mid-August, and the mid-August total was 11.33 per cent below that of August, 1948, according to the preliminary summary prepared by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The index number, based on the 1935-1939 average as 100, was 115.4 for August, as compared with 115.9 for July and 130.1 for August, 1948.

August employment was below that of the previous month in five of the seven groups, the two increases being the 0.27 per cent rise in the maintenance of equipment and stores group and the 0.55 per cent rise in the group embracing transportation employees other than those in train, engine and yard service. All five decreases except that in the maintenance of way and structures group (down 2.51 per cent) were less than one per cent.

As compared with August, 1948, there were decreases in all groups. They ranged from 15.68 per cent in the maintenance of equipment and stores group to 0.95 per cent in the group embracing executives, officials and staff assistants.

General-Commodities Truckers May Transport Some Explosives

Motor carriers authorized to transport "general commodities except 'dangerous explosives'" may lawfully transport explosives which the Interstate Commerce Commission has classified as "relatively safe," but "not those which it has classified as 'dangerous' whether more dangerous or less dangerous." Advice to that effect was included by the commission's Division 5 in a recent report which also advised that "conversely, a carrier authorized to transport 'dangerous explosives' may transport only those commodities classified as 'dangerous' and 'less dangerous' in the regulations of the commission."

The report, in No. MC-59680 (Sub-No. 68) dealt with an application of the Strickland Transportation Company, and found that public convenience and necessity required operations by that trucker as a common carrier of "dangerous explosives" over a network of routes in Texas, Oklahoma, Arkansas, Louisiana, and Missouri. In passing upon the application, the division found that questions as to the identity of commodities comprehended by the term "dangerous explosives" were "deserving of special

comment." That comment, which led to the interpretations noted above, was as follows:

"Notwithstanding that such term ['dangerous explosives'] is frequently used in describing a class of commodities specifically granted or excepted from general-commodity authorizations, we have not heretofore specifically declared the commodities included in that term. This does not mean, however, that we have left the term undefined or that it is indefinite. In the commission's Regulations Governing the Transportation of Explosives and Other Dangerous Articles by Rail Freight, Express and Baggage Services, and by Motor Vehicle (Highway) and Water, the various different explosives are classified as 'Dangerous,' 'Less Dangerous,' and 'Relatively Safe.' With this formal declaration of the commodities deemed from a transportation standpoint to be dangerous to a greater or lesser degree as contrasted with those which are deemed to be relatively safe the proper construction of the term 'dangerous explosives' as used in operating authorities of carriers is clear."

Freight Car Loadings

Loadings of revenue freight in the week ended September 10, which included the Labor Day holiday, totaled 624,197 cars, the Association of American Railroads announced on September 15. This was a decline of 79,733 cars, or 11.3 per cent, below the previous week, a drop of 164,814 cars, or 20.9 per cent, under the corresponding week last year (which also excluded the Labor Day holiday), and a decrease of 298,182 cars, or 32.3 per cent, below the equivalent 1947 week (which did not include the Labor Day holiday).

Loadings of revenue freight for the week ended September 3 totaled 703,930 cars, and the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, September 3			
District	1949	1948	1947
Eastern	126,564	157,675	140,743
Allegheny	133,176	182,567	166,364
Pocahontas	48,563	71,913	59,837
Southern	104,514	129,981	118,367
Northwestern	124,606	146,931	135,273
Central Western	111,951	137,796	127,024
Southwestern	54,556	68,265	61,331
Total Western Districts	291,113	352,995	323,628
Total All Roads	703,930	895,131	808,939
Commodities:			
Grain and grain products	45,466	51,212	47,733
Livestock	11,074	11,143	14,565
Coal	120,882	179,721	156,384
Coke	9,178	14,805	12,829
Forest products	37,103	50,925	44,524
Ore	63,260	77,422	75,995
Merchandise l.c.l.	83,852	108,246	103,267
Miscellaneous	333,109	401,657	353,642
September 3	703,930	895,131	808,939
August 27	746,912	891,666	925,712
August 20	731,215	900,663	900,895
August 13	728,029	891,276	906,305
August 6	716,824	878,647	905,244
Cumulative total 35 weeks	25,124,637	28,703,577	29,625,839

In Canada.—Carloadings for the week ended September 3 totaled 85,046 cars,

compared with 86,179 cars for the previous week, and 87,274 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
September 3, 1949	85,046	30,569
September 4, 1948	87,274	33,495
Cumulative totals for Canada:		
September 3, 1949	2,563,563	1,079,972
September 4, 1948	2,644,824	1,206,340

Earl B. Smith Elected a Director of T.A.A.

The Transportation Association of America has announced the election to its board of directors of Earl B. Smith, vice-president and director of traffic of General Mills, Inc., Minneapolis, Minn. Mr. Smith is also a member of the executive committee and board of directors of the National Industrial Traffic League and of the Minneapolis Grain Exchange, and is vice-president and a board member of the Minneapolis Traffic Association.

Strikes Postponed On Pittsburgh Roads

Strikes which threatened to tie up the Monongahela Connecting and the Union were postponed before the walkout times arrived. The Brotherhood of Railroad Trainmen represents the employees in

both cases, and both involve grievances within the jurisdiction of the National Railroad Adjustment Board.

The Monongahela Connecting strike, which had been set for September 10, was postponed when President Truman on September 9 issued an executive order creating an emergency board to investigate the dispute. The Union strike, which had been set for September 13, was postponed at the request of the National Mediation Board which is now making a new effort to bring about a settlement of the dispute. This Union case has already been the subject of an emergency board report which was rejected by the brotherhood (see *Railway Age* of August 13, page 78).

Additional General News appears on pages 111, 112 and 113.

OVERSEAS

British Railways Take Ticket Office to Beaches

As part of the British Railway Executive's drive to secure the greatest possible number of passengers for excursion facilities a mobile ticket office complete with tickets, timetables and travel literature is touring the beaches of south coast resorts selling tickets for day, half-day and evening excursions from local stations, and giving the public any requested travel information.

The mobile office consists of a large highway trailer fitted with ticket racks, counters and cabinets for travel literature. It also includes emergency living accommodations for the staff. It is being hauled from point to point by a British Railways tractor.

ORGANIZATIONS

The Pacific Northwest Advisory Board will be addressed by J. M. Hood, president of the American Short Line Railroad Association, at the board's 75th regular meeting on September 23, at the Davenport Hotel in Spokane, Wash.

The National Association of Shippers Advisory Boards will hold its next meeting October 18 and 19, in the Jefferson Hotel, St. Louis, Mo.

The 91st regular meeting of the Ohio Valley Transportation Advisory Board will be held on September 21, in the Hotel Prichard, Huntington, W. Va. A luncheon, sponsored jointly by the Huntington Chamber of Commerce and the KY-

O-VA Traffic Club, will be held at 12:15 p.m. in the ball room of the hotel, with Borge Rosing, vice-president and general manager of the West Virginia Steel & Manufacturing Co., Huntington, as guest speaker.

The Car Department Association of St. Louis will hold its opening meeting of the fall season on September 27, at 8 p.m., at the Hotel DeSoto, St. Louis, Mo. An illustrated address on Wire Rope Slings and their use in the railroad industry will be presented by F. W. Von Wehrden, sales and test engineer for the Broderick & Bascom Rope Co.

The annual meeting of South Central Region, National Association of Corrosion Engineers, will be held at the Adolphus Hotel, Dallas, Tex., on October 3 and 4. The program will include eight technical papers on various corrosion problems, a panel discussion and various committee meetings.

The Atlantic States Shippers Advisory Board will hold its next regular meeting on October 5 and 6, at the Mark Twain Hotel, Elmira, N. Y.

"Distribution in a Changing Market" and "World Aspects of Distribution" will be the themes of the 21st annual Boston (Mass.) Conference on Distribution, October 10-11.

The annual meeting of the American Society for Metals will be held October 17-21, in the Public Auditorium, Cleveland, Ohio.

SUPPLY TRADE

The New York sales office of the Ulster Iron Works will be moved to the company's general offices at Dover, N. J., on October 1.

Vernon H. Patterson, formerly sales metallurgist of the American Brake Shoe Company, has joined the development staff of the Climax Molybdenum Company, Detroit, Mich.

James S. Drillette has been appointed vice-president in charge of production of the Transport Products Corporation, with headquarters at Louisville, Ky. Mr. Drillette is a former vice-president of the Peerless Manufacturing Corporation, Louisville, where he was in charge of all production, including production of materials made in the signal department, which department the Transport Products Corporation purchased in 1946.

John A. Roebling's Sons Company, Trenton, N. J., has announced that its new Denver, Colo., office and warehouse at 4801 Jackson street will be ready for occupancy on September 30. Homer H.

The Missouri Pacific Strike

"At issue in the [Missouri Pacific] dispute is no demand for higher wages or social benefits, but the determination of more than two hundred disagreements arising under existing contracts and going back over the last several years. While there would seem to be something clearly at fault in a system which allows such a mass of unsettled claims to pile up, recent offers have promised to dispose of them with reasonable speed. But all these offers the union has refused. The National (Railway) Mediation Board and an emergency board appointed under the terms of the railway labor act have alike seen their proposals rejected. The unions have refused to arbitrate and have refused to submit the outstanding cases to the Railway Adjustment Board. They have insisted on either a complete granting of their claims or a strike.

"The continued operation of the railways has long been considered essential to the public interest, and railway labor itself has recognized that it is under a special obligation. In the present instance, however, labor has acted as if it were involved in a negligible business of purely local ramifications. The example is unfortunate, and it can only be hoped that it will remain in railway annals an incident of short duration and of unrepresentative character."

—From an editorial in the New York Herald Tribune

Davis, who has represented the company in the Denver area for 23 years, will be manager and Roy H. Hainsworth, assistant.

W. C. Bryant, formerly mechanical expert for the southwestern district of the Westinghouse Air Brake Company, at St. Louis, Mo., has been appointed representative in charge of the Houston, Tex., office, succeeding the late O. W. Swartz, whose death is reported elsewhere in this issue.

The Lima-Hamilton Corporation has announced appointment of the St. Louis Railway Supply Company, 2114 North Second street, St. Louis, Mo., as sales agent for Lima-Hamilton products in the St. Louis area.

The Vapor Heating Corporation, Chicago, has appointed T. A. Stewart, Jr., to work with railroads in Washington, Oregon, Idaho and Vancouver island, B. C., in connection with the use of the firm's



T. A. Stewart, Jr.

Vapor-Clarkson steam generators and train heating controls. Mr. Stewart was with the Atchison, Topeka & Santa Fe for 12 years before joining Vapor Heating.

Robert R. King has been appointed Chicago and mid-western representative for the Paxton-Mitchell Company and the Paxton Diesel Engineering Company, Omaha, Neb. Mr. King received his degree in engineering from Iowa State College in 1943, and during World War II served in the field artillery as a captain. After the war he was employed by the Paxton-Mitchell Company in the engineering and foundry departments, and was later appointed manager of Sensation Engines, a subsidiary of the Paxton-Mitchell Company.

The Equipment Research Corporation has announced the appointment of the Mount Royal Specialties Co., Sun Life building, Montreal, Que., as its exclusive distributor in Canada for Mines Equipment Company products; Baffle-Air system of air distribution; hand lantern

battery testers, and Safeguard Electric Company's lamp guards.

The Chain Belt Company, Milwaukee, Wis., has opened a modern warehouse in conjunction with new expanded facilities for its Dallas (Tex.) district sales office at 1611 Dragon street.

Leo E. Flinn has been appointed to the sales staff of the Dearborn Chemical Company, Chicago, and will serve as sales representative in the promotion of the company's No-Ox-Id rust preventives in the railroad field.

Albert D. Prendergast, lubrication engineer and assistant division manager of the Texas Company at St. Paul, Minn., has retired.

OBITUARY

O. W. Swartz, representative in the Houston, Tex., office of the Westinghouse Air Brake Company, died recently. Mr. Swartz joined the company in 1919 and was appointed mechanical expert in the St. Louis, Mo., office in 1923. In 1930 he was appointed representative at Dallas, Tex., and, in 1937, was transferred to Houston.

Webb Guy Krauser, president, Canadian Cardwell Company, Montreal, Que., died recently at the Perth Memorial Hospital, Perth, Ont. He was 69 years old.

James L. Reese, district manager of the Pyle-National Company at Baltimore, Md., died in that city on August 28. Mr. Reese, who was born on August 9, 1889, at Ducktown, Tenn., had been employed by Pyle-National since 1918. He had previously served with the Central of Georgia and the Louisville & Nashville.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

7,178 Freight Cars Delivered in August

Freight cars for domestic use delivered during August totaled 7,178, including 2,933 delivered by railroad shops, compared with July deliveries of 6,434 cars, which included 2,779 delivered by railroad shops, the American Railway Car Institute has announced. August deliveries included 877 box cars, 2,880 hopper cars, 1,816 gondola cars, 870 refrigerator cars, 520 tank cars and 215 cars of other types.

Freight-train cars ordered last month for domestic use amounted to 185 (all ordered from contract builders), compared with July orders for 408 cars,

which included 200 ordered from railroad shops, the institute said. The backlog of orders on September 1 was 28,731 cars, including 14,192 on order from railroad shops, compared with 36,564 cars on order on August 1 and 117,815 on order on September 1, 1948.

LOCOMOTIVES

The National of Mexico intends to purchase 60 Diesel-electric locomotives and a considerable amount of railroad shop machinery, including equipment for servicing the locomotives, according to a recent issue of Foreign Commerce Weekly. Interested firms may communicate with Rudolfo R. Flores, chief purchasing agent, Ferrocarriles Nacionales de Mexico, Bolivar 19, Mexico, D.F.

The Long Island has ordered eight 2,000-hp. Diesel-electric passenger locomotives from Fairbanks, Morse & Co. The road's request for court authority to make the purchase, which has since been granted, was reported in last week's *Railway Age*. In addition, the L. I. received court authority to cancel orders placed with the American Locomotive Company for nine 660-hp. Diesel-electric switching locomotives and order in their place eight 1,000-hp. Diesels, of which four will be used in passenger service and four in road freight service.

SIGNALING

The Nashville, Chattanooga & St. Louis has ordered equipment from the General Railway Signal Company for installation of an entrance-exit interlocking system at Howell, Ga. The 30- by 91-in. control panel will be equipped with 49 entrance knobs, 49 exit buttons, 26 test keys, 2 traffic levers, 2 lock levers, 3 maintainer call levers, and 61 track lights for the control of 41 switch machines, 2 electric switch locks and 49 signals. The area to be controlled includes a junction with the Southern. Types K and B relays, model 5A electric switch machines and types D and ME (dwarf) signals will be used.

CONSTRUCTION

Chicago & Eastern Illinois.—This road has erected, at its northern terminal freight yard in Chicago, a 500,000-gal. fuel oil tank for servicing Diesel locomotives. Installed at a cost of \$42,000, the tank and pumphouse are enclosed by a cyclone fence and are said to be as explosion-proof and fireproof as is possible.

Illinois Central.— This road has awarded a contract to Bates & Rogers Construction Corp. for work on the Wolf River bridge at Memphis, Tenn., at a cost of approximately \$40,000. The



ELECTRIC ROAD MAKES GOOD USE OF TRUCK CRANE—The Chicago South Shore & South Bend, 78 mi. long, uses a truck crane, manufactured by the Michigan Power Shovel Company, as a "jack of all trades" to do almost anything from clearing wrecks to laying rail. When laying rail the crane is normally operated on the right-of-way adjacent to the track, but if the terrain is too rough, too swampy or too sandy for easy movement of a rubber-tired vehicle, the crane can be run on the track, over the ties and ballast, as shown in the above illustration. All rail laid on the South Shore is handled in this way

job involves the construction of a new concrete pier to permit relocation of the present 100-ft. through plate girder span and replacement of 100 ft. of ballast deck trestle with a new 100-ft. through plate girder on two new pile piers and the new concrete pier.

Union Pacific.—This road will begin construction in October of a medical dispensary at Cheyenne, Wyo., the work to be performed by the Miller Construction Company of that city. The new structure, to be located near the road's station, will be 64 ft. by 43 ft., of brick construction, and will contain a reception room, emergency surgery room, three-bed ward, drug dispensary, doctor's office, examining rooms and a nurse's room.

FINANCIAL

Alleghany Corporation.—*Security Transactions.*—This company, during August, sold 12,905 shares of New York, Chicago & St. Louis common stock and 1,473 shares of Seaboard Air Line preferred stock. Alleghany's share of the recent purchase by it and affiliated companies of the 59,500 shares of Wheeling & Lake Erie common stock owned by the Pennroad Corporation (see *Railway Age* of September 3, page 80), was 23,900 shares.

Atchison, Topeka & Santa Fe.—*Purchase.*—Division 4 of the Interstate Commerce Commission has authorized this road to purchase approximately 1.2 mi. of the Colorado's main line right-of-way in Pueblo, Colo., and approximately 38

acres of land and 0.76 mi. of switching tracks from the Pueblo Terminal. For the property, the S.F. will pay the Colorado \$57,000 and the Pueblo Terminal \$51,150 and will make any necessary relocations of the former's lines. Such purchases, the report said, will enable the S.F. to construct a new yard to replace its old one which has become "inadequate" because it has insufficient tracks to accommodate present-day traffic.

Boston & Maine.—*Acquisition of Lessors' Lines.*—This road has applied to the Interstate Commerce Commission for authority to acquire the properties and franchises of its wholly owned subsidiaries and lessors, the Vermont Valley and the Sullivan County, which companies it proposes to dissolve. The former's line extends from Brattleboro, Vt., to Bellows Falls, 24 mi., and the latter from Bellows Falls to a point near Windsor, Vt., 25 mi. The transaction would involve no payment by the B.&M. other than the surrender of the lessors' capital stock for cancellation. Concurrently, the B.&M. also has applied to the commission for authority to assume liability for \$306,000 of first mortgage sinking fund, 4 per cent bonds of the Vermont Valley. The application said that the proposed acquisition would result in corporate simplification of the B.&M. by permitting it to acquire direct ownership of properties now held by subsidiary corporations which serve no useful purpose.

Central of New Jersey.—*New Directors.*—The nine-man board of this road, which will emerge from bankruptcy on October 1 (see *Railway Age* of September 3, page 80), has been reconstituted with the following members: Roy B. White (chairman), president of the Baltimore & Ohio

and chairman of the Reading; Revelle W. Brown, president of the Reading; J. Hamilton Chase, president of the Philadelphia Savings Fund Society; William V. Griffin, chairman of the Brady Security & Realty Corp., New York; John W. Kress, vice-president of the Howard Savings Institution, Newark, N. J.; Frank C. La Grange, senior partner of La Grange & Co., New York; Earl T. Moore, whose election as president of the C. of N. J. is reported elsewhere in this issue; Fred N. Oliver, senior partner of Oliver & Donnally, New York law firm, and William I. Woodcock, Jr., vice-president and general counsel of the Reading.

The board announced that the next annual stockholders' meeting would be held on December 5 and that it was expected new securities provided for in the plan of modification (see *Railway Age* of March 12, page 106), would be ready for exchange for present securities early in October. The board has appointed the Irving Trust Company, 1 Wall street, New York, as its agent for the exchange of securities.

Chicago & North Western.—*New Director.*—Harold H. Tearse, vice-president of the Searle Grain Company, Minneapolis, Minn., has been elected a director of this road.

Chicago, St. Paul, Minneapolis & Omaha.—*New Director.*—Richard P. Carlton, executive vice-president of the Minnesota Mining & Manufacturing Co., St. Paul, Minn., has been elected a director of this road.

Lehigh Valley.—*Merger of Subsidiaries.*—This road and 11 of its subsidiaries have applied to the Interstate Commerce Commission for authority to merge under Section 5 of the Interstate Commerce Act. The subsidiaries, which are leased to the L.V., include the Lehigh Valley Rail Way which extends from the New York-Pennsylvania state line near Sayre, Pa., to Buffalo, N. Y., 175 mi., and 275 mi. of branch lines. The other companies are the Lehigh & New York; Lehigh Valley of New Jersey; Lehigh Valley Harbor Terminal; Pennsylvania & New York Canal; State Line & Sullivan; Montrose; Loyalsock; Delaware, Susquehanna & Schuylkill; Easton & Northern; and Schuylkill & Lehigh Valley. The L. V. owns all the stock of each subsidiary except the Lehigh & New York, of which it owns 99 per cent. The merger plan provides that the shares of stock of the 11 subsidiary corporations shall be cancelled and that the L. V. shall pay the holders of the New York Company's stock not owned by it \$3.75 for each share of common; \$10 for each share of preferred, and for the preferred stock scrip at the rate of \$10 per share of preferred stock. The plan would also make the L. V. obligated for the mortgage bonds of the companies to be merged. The application said that the proposed merger would effect economies in taxes, administration

and accounting and would simplify relations with the public authorities.

Average Prices Stocks & Bonds

	Sept. 13	Last week	Last year
Average price of 20 representative railway stocks	38.40	37.30	48.89
Average price of 20 representative railway bonds	85.72	85.31	89.32

Dividends Declared

Southern. —M. & O. Stock Trust, \$2.00, semi-annual, payable October 1 to holders of record September 15.

RAILWAY OFFICERS

EXECUTIVE

John W. Scott, whose election as vice-president in charge of traffic of the Kansas City Southern Lines, at Kansas City, Mo., was reported in the *Railway Age* of September 3, began his railroad career as a stenographer in the traffic department of the Illinois Central at Shreveport, La., in 1927. Two years later he became a clerk in the office of the senior vice-president of the Louisiana & Arkansas at Shreveport. When the K.



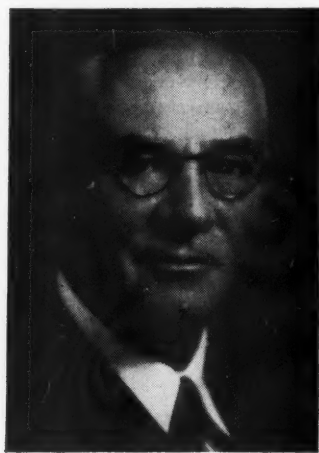
John W. Scott

C. S. acquired that road he was transferred to the general traffic office at Kansas City, and in April, 1940, was appointed chief clerk to the vice-president—traffic. Mr. Scott was advanced to executive general agent at Beaumont, Tex., in June, 1948, and was promoted to western district traffic manager at San Francisco, Cal., in January of this year, in which capacity he was serving at the time of his election as vice-president.

Earl T. Moore, chief executive officer of the Central of New Jersey since November 1, 1947, has been elected president of that road. The election was held as the C. of N. J. prepared to emerge from bankruptcy on October 1 under the terms of its plan of capital modification under the so-called Mahaffie Act

(see *Railway Age* of September 3, page 80). **Arthur C. Tosh**, former chief operating officer, was elected vice-president and general manager. Sketches of the careers of Messrs. Moore and Tosh were published in the *Railway Age* of November 1, 1947, page 46. **Roy B. White**, president of the Baltimore & Ohio, will continue as chairman of the C. of N. J.

Guy B. Wood, who has retired as vice-president in charge of traffic of the Kansas City Southern Lines at Kansas City, Mo., as reported in the *Railway Age* of September 3, was born at Hot Springs, Ark., on November 3, 1878. He received his bachelor of arts degree from the University of Arkansas in 1899, and in September of that year entered railroad service with the Kansas City, Pittsburg & Gulf (K. C. S. predecessor) as general clerk in the traffic department at Texarkana, Tex., being appointed commercial agent at that point in 1902. Four years later he became general agent at Shreve-



Guy B. Wood

port, La., and in 1910 he returned to Texarkana to serve as assistant general freight agent for the K. C. S. and general freight agent for the Texarkana & Ft. Smith (now part of the K.C.S.). From 1916 to 1918, he served as assistant to the president of the K. C. S. at Beaumont, Tex., and subsequently held a similar position at Kansas City. He reentered the traffic department in 1928 as general freight agent at Kansas City, and the next year became freight traffic manager. In November, 1937, Mr. Wood was elected vice-president in charge of traffic.

William S. Kerr, whose appointment as executive assistant of the Burlington Lines, at Chicago, was reported in the *Railway Age* of September 3, was born at Portland, Ore., on December 11, 1911. He received his higher education at the University of Minnesota, where he studied engineering and business from 1932 to 1936. Mr. Kerr began his railroad career with the Burlington in April, 1936, serving as rail heat taker, timekeeper and with the system steel gang until September of that year, when he

became junior engineer. In August, 1937, after holding various positions at the Lincoln (Neb.) yard, and at Macon, Mo., and Palmyra, he was advanced to assistant trainmaster, being assigned successively to the Omaha, Neb., Lincoln, Wymore and Alliance divisions. In August, 1939, he was promoted to trainmaster on the Casper division, and in January, 1943, he entered military service



William S. Kerr

as a captain of engineers, serving with the 745th Railway Operating Battalion in India and as commanding officer of the 61st Engineers in Burma. After his discharge with the rank of major in December, 1945, Mr. Kerr returned to the Burlington as assistant superintendent of the La Crosse division. He was promoted to assistant to general manager in November, 1947, the post he held prior to his recent appointment.

E. L. Potarf, whose promotion to assistant to president—operation of the Burlington Lines, with headquarters at Chicago, was reported in the *Railway Age* of September 3, has served with the Burlington continuously since 1919. He was appointed division engineer at Alliance, Neb., in 1922, and became assistant engineer at Chicago in 1931. Three years later he was advanced to district engineer, maintenance of way, at Omaha, Neb., where he remained until his appointment in 1939 as assistant superintendent, at Sterling, Colo. From April, 1945, to April, 1946, he held the same position at Alliance, Neb., subsequently being promoted to superintendent at Casper, Wyo. Mr. Potarf was transferred to McCook, Neb., in October, 1948, at which point he was serving at the time of his recent promotion.

Fred E. Sperry, whose promotion to assistant vice-president—operations of the Burlington Lines at Chicago, was reported in the *Railway Age* of September 3, was born at Detroit, Mich., on March 27, 1891, and attended Central High School, St. Paul, Minn. He entered railroad service with the Burlington in October, 1907, as a yard clerk at St. Paul, and two years later became a telegraph

operator on the La Crosse division. Between 1912 and 1920, he served successively as chief clerk to the assistant superintendent at St. Paul, and as night yardmaster at La Crosse, Wis., and Savanna, Ill., subsequently being promoted to general yardmaster at Savanna. After holding the latter position at St. Paul from 1925 to 1928, he was advanced



Fred E. Sperry

to trainmaster at Galesburg, Ill., and later that year was made terminal trainmaster at Galesburg. He was subsequently appointed acting superintendent of terminals at St. Louis, Mo., becoming assistant to the general manager at Chicago in 1936. Mr. Sperry was advanced to general superintendent of transportation at Chicago in December, 1937, the post he held at the time of his recent promotion.

Frank L. Kartheiser, whose appointment as assistant to president of the Burlington Lines, at Chicago, was reported in the *Railway Age* of September 3, was born at Aurora, Ill., on April 19, 1893,



Frank L. Kartheiser

and was graduated from high school in 1910. From 1912 to 1914, he studied engineering and subsequently attended the United States Naval Reserve Officers Training School at Pelham Bay, N. Y.,

as an ensign. He first entered railroad service with the Burlington in 1909 as a timekeeper at Aurora, and in 1917 left that road to join the United States Naval Reserve Forces. Two years later he became employed by the United States Railroad Administration, Central Western region, and in 1920 he re-entered Burlington service. Mr. Kartheiser was subsequently advanced to assistant to vice-president—operations at Chicago, in which capacity he was serving at the time of his recent promotion.

H. C. Murphy, whose election as president of the Chicago, Burlington & Quincy, with headquarters at Chicago, was first reported in the *Railway Age* of August 6, has been elected also president of the three other lines comprising the Burlington system—the Colorado & Southern, the Fort Worth & Denver City and the Wichita Valley.

FINANCIAL, LEGAL & ACCOUNTING

A. C. Mundy, whose promotion to freight claim agent of the Chicago & North Western, with headquarters at Chicago, was reported in the *Railway Age* of September 3, entered railroad service with the North Western in 1905



A. C. Mundy

as a clerk and investigator in the freight claim department. In 1917 he was appointed auditor of that department, becoming chief clerk in 1926. Mr. Mundy was advanced in 1942 to assistant freight claim agent at Chicago, which position he held at the time of his recent promotion.

Richard Swan Buell has been appointed counsel to Peter S. Duryee, trustee of the New Jersey & New York, succeeding Walter T. Margette, Jr., who has been appointed treasurer of the state of New Jersey.

Elmer M. Johnson, assistant auditor of pay roll accounts of the Southern Pacific at San Francisco, Cal., has been promoted to auditor of pay roll accounts

at that point, succeeding J. A. Quinn, advanced to local treasurer at San Francisco, as reported in the *Railway Age* of September 10.

Norman J. MacMillan, general counsel of the Canadian National system, with headquarters at Montreal, Que., has been appointed vice-president and general counsel of the C.N.R. and its subsidiaries, and the Canadian National West Indies Steamships, Ltd. Born at Bracebridge, Ont., on April 8, 1909, Mr. MacMillan received his B.A. degree in



Norman J. MacMillan

1930 and his LL.B. degree in 1934 from the University of Manitoba. He entered the service of the Canadian National in 1937 as solicitor in the law department at Winnipeg, Man., and in 1943 was appointed assistant general solicitor at Montreal. On June 1, 1945, he was appointed general counsel, with jurisdiction over the law department of the system.

Rolland A. Haag, land agent of the Lehigh Valley since 1945, has been appointed assistant general land and tax agent, with headquarters at New York, succeeding William R. Headden, who has retired under the pension rules of the company, after 30 years in that position.

Judson C. McLester, Jr., who joined the Central of New Jersey on September 5, 1947, as chief law officer at New York, has been appointed general counsel. R. E. Thompson, chief accounting officer, and P. M. Parker, property manager, both at Jersey City, N. J., will retain those titles when the road emerges from bankruptcy on October 1 under the terms of its capital modification plan (see *Railway Age* of September 3, page 80).

OPERATING

N. T. Walton, trainmaster of the St. Lawrence division of the Canadian National at Montreal, Que., has been appointed assistant superintendent at Montreal, with jurisdiction over the St. Hyacinthe, St. Jules, Rouses Point, Massena, Beauharnois, Hemmingford,

Lemoyne and Granby subdivisions, succeeding **W. A. Easton**, who has been transferred to the Cornwall subdivision at Brockville, Ont. Mr. Easton succeeds **J. D. McBain**, who has been transferred to the Ottawa division at Ottawa, Ont., to replace **W. H. Roach**, retired. **J. J. Campbell**, rule instructor, Northern Ontario district, succeeds Mr. Walton as trainmaster at Montreal.

W. F. Davis, whose promotion to superintendent of the Western divisions, New York Central, and of the West division, Michigan Central, at Chicago, was reported in the *Railway Age* of September 3, entered railroad service with the N. Y. C. in June, 1918, as a telegraph operator at Erie, Pa. In 1920 he became relay operator at Cleveland, Ohio, and



W. F. Davis

two years later returned to Erie as train dispatcher, subsequently being appointed extra chief train dispatcher. He was promoted to trainmaster at Columbus, Ohio, in December, 1940, and continued to serve at that point until his promotion to assistant to general manager at Cleveland, Ohio, in January, 1946. The following August Mr. Davis became assistant superintendent at Chicago, the post he held at the time of his recent promotion.

C. G. Adams, whose retirement as superintendent of the Arkansas division, Chicago, Rock Island & Pacific, at Little Rock, Ark., was reported in the *Railway Age* of August 20, was born at Baltimore, Md., on January 18, 1882. He entered Rock Island service in November, 1902, in the office of the auditor of disbursements at Chicago, and subsequently served in various capacities, including that of timekeeper, accountant, traveling accountant, chief clerk, transportation clerk and contract representative. He was appointed passenger trainmaster of the Chicago terminal division in 1922, advanced to trainmaster of the Nebraska-Colorado division, at Goodland, Kan., in 1927, was transferred to the Illinois division in March, 1936. The following October, Mr. Adams returned to the Nebraska-Colorado division as su-

perintendent at Fairbury, Neb., being appointed to the same post on the Panhandle division at Dalhart, Tex., in 1937. He became superintendent of the Arkansas division in July, 1939.

C. L. Franklin has been appointed general manager of the Chicago, Rock Island & Pacific, with headquarters at Chicago. Mr. Franklin has been acting general manager at Chicago since July 1, when he succeeded **G. W. Raney**, who was granted a furlough because of ill health, as reported in the *Railway Age* of July 9.

Orlando H. Frick, general manager of the Chicago Union Station for more than 18 years, will retire from service on October 1. He will be succeeded by **Clarence P. Fisher**, as noted in the *Railway Age* of September 10. Mr. Fisher was born on November 3, 1891, at Buffalo, N. Y., where he received his education, and entered railroad service in January, 1906, in the motive power department of the Pennsylvania's Buffalo division. From 1910 to 1927, he held the positions of car repairman, car inspector, yard brakeman, yard conductor and assistant yardmaster, subsequently becom-



Clarence P. Fisher

ing general yardmaster on the Conemaugh division. He served one year as assistant freight trainmaster on the Long Island and on special duty for the Pennsylvania's chief of freight transportation at Philadelphia, Pa., and for the general manager of the Western region. In 1929 he was advanced to trainmaster of the Pennsylvania's Indianapolis division, and in 1933 was transferred to the Chicago Terminal division. He was further promoted to superintendent of the latter division in November, 1936, the post he held until his new appointment with the Chicago Union Station. Mr. Fisher served as president of the American Association of Railroad Superintendents in 1947-48.

Robert Sidney Hampshire, whose retirement as general manager of the Railway Express Agency, at Chicago, was reported in the *Railway Age* of September

3, was born at Martinsburg, Ohio, on July 2, 1883. He began his career with the R.E.A. and its predecessor companies in March, 1902, as a transferman at Akron, Ohio, and later held various positions at Pittsburgh, Pa., Chicago, and Oklahoma City, Okla. From 1912 to 1917, he served consecutively as agent at Memphis, Tenn., depot agent at San Antonio, Tex., and agent and traveling agent at Houston, Tex. In 1917 he became general agent at El Paso, Tex., subsequently holding the same position at Dallas, Tex., until 1919, when he was promoted to superintendent at the latter point. He was later transferred to San Antonio, and in 1939 was advanced to general superintendent of terminals and vehicle service at Chicago. Mr. Hampshire was appointed superintendent of organization at Chicago in February, 1941. He also held that post at New York, and in July, 1944, was further advanced to general superintendent of organization at New York. He had served as general manager at Chicago since January, 1945.

Harry E. Hinshaw, whose promotion to general manager, lines west of the Missouri River, of the Chicago, Burlington & Quincy, with headquarters at Omaha, Neb., was reported in the *Railway Age* of September 3, was born in Randolph County, Ind., on February 1, 1888. He entered railroad service in June, 1907, as a yard clerk on the Lake Erie & Western (now part of the New York, Chicago & St. Louis) at New Castle, Ind. In 1908 he became a brakeman for that road, and the following year joined the Burlington in the same position at Mc-



Harry E. Hinshaw

Cook, Neb. From 1918 to 1933, he served successively as conductor and general yardmaster at McCook, and as trainmaster at Alliance, Neb., Casper, Wyo., Wymore, Neb., and McCook. Mr. Hinshaw subsequently became assistant superintendent at McCook, and was later transferred to Wymore. He also held the latter position at La Crosse, Wis., until his promotion to assistant to general manager at Omaha in September, 1939. Mr. Hinshaw was advanced to superin-

tendent at Hannibal, Mo., in October, 1939, returning to McCook in that capacity in April, 1945. He became general superintendent at Galesburg, Ill., in November, 1947, the post he held at the time of his promotion.

G. Eckhardt, superintendent of the St. Joseph division, Chicago, Burlington & Quincy, at St. Joseph, Mo., has been transferred to the Ottumwa and Creston division, with headquarters at Ottumwa, Iowa, succeeding **Elwood P. Stine**, promoted to general superintendent, Central district, at Burlington, Iowa, as reported in the *Railway Age* of September 3. **R. R. Gavin**, assistant to general manager, Lines West of the Missouri river, at Omaha, Neb., has replaced Mr. Eckhardt, and has in turn been succeeded by **E. R. Shrader**, assistant superintendent at Lincoln, Neb. **J. C. Grisinger, Jr.**, superintendent of the Casper-Sheridan divisions at Casper, Wyo., has been transferred to the McCook division at McCook, Neb., to succeed **E. L. Potarf**, promoted to assistant to vice-president—operations at Chicago, as reported in the *Railway Age* of September 3. **R. L. Sims**, assistant superintendent of the La Crosse division at La Crosse, Wis., has been advanced to succeed Mr. Grisinger, and has been succeeded in turn by **M. I. Swennes**, trainmaster at Beardstown, Ill. **H. A. Benedetto**, trainmaster at Aurora, Ill., has replaced Mr. Shrader.

Harold E. Calhoun, superintendent of the Southern division of the Bangor & Aroostook at Bangor, Me., has retired, after more than 46 years of service with that road. The title of superintendent Southern division has been abolished and the duties of that office have been assumed by the superintendent of transportation, **L. E. Terrio**. **Samuel P. Ruth** has been appointed superintendent car service. Mr. Calhoun was born at St. Martins, N. B., on January 20, 1886, and entered railroad service in February, 1903, as telegraph operator with the Bangor & Aroostook. He was appointed train dispatcher in April, 1910; chief train dispatcher in October, 1918; assistant trainmaster in May, 1920; superintendent car service in May, 1931, and superintendent of the Southern division on November 1, 1947.

TRAFFIC

The title of **D. Y. Smith**, chief traffic officer of the Central of New Jersey at New York, will be changed to chief freight traffic officer on October 1, when the road will emerge from bankruptcy under its capital modification plan (see *Railway Age* of September 3, page 80). **H. E. Yerkes**, passenger traffic manager at New York, will retain that title.

Hayward D. Luckett, assistant general freight and passenger agent of the Southern at Columbus, Ga., has retired after more than 54 years of service with that system. **Frederick L. Quincy**, district freight and passenger agent, has been

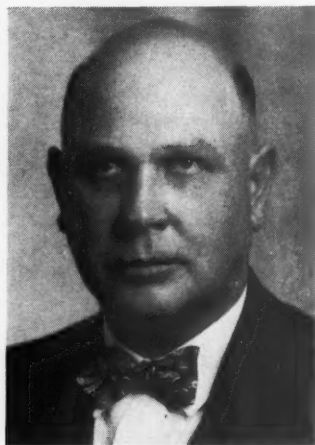
promoted to division freight and passenger agent, with headquarters as before at Columbus. **William C. Richardson**, assistant general freight agent at Cincinnati, Ohio, has been appointed assistant to freight traffic manager, with headquarters at Washington, D. C.

Harry L. Sullivan has been appointed western district traffic manager of the Kansas City Southern Lines at Los Angeles, Cal., succeeding **J. W. Scott**, whose promotion to vice-president in charge of traffic at Kansas City, Mo., was reported in the *Railway Age* of September 3. Mr. Sullivan has jurisdiction over the Los Angeles (Cal.), San Francisco and Seattle (Wash.) agencies.

Robert M. Hendley has been appointed freight traffic agent of the Nashville, Chattanooga & St. Louis at Savannah, Ga.

MECHANICAL

J. Orville Fraker, whose appointment as electrical engineer and Diesel supervisor of the Texas & Pacific at Dallas, Tex., was reported in the *Railway Age* of September 3, was born at Orbisonia, Pa., on January 14, 1899. He received his high school education in his home town and at Bucknell Academy, Lewisburg, Pa., and in 1920 obtained a degree in electrical engineering from Bucknell University, Lewisburg. He began his career in 1917 as an instrumentman with the East Broad Top Railroad & Coal Co. at Orbisonia, and, from 1920 to 1922,



J. Orville Fraker

served as draftsman with the Pennsylvania at Pitcairn, Pa. He subsequently became employed by the Pennsylvania highway department as highway inspector and engineer, and in January, 1923, joined the T. & P. as electrician at Marshall, Tex., being appointed electrician foreman at that point in April, 1923. Mr. Fraker was transferred to Dallas in 1937 as electrical engineer in the mechanical superintendent's office, and became general electrical and shop engineer there in July, 1946, which position he held prior to his recent appointment.

Earl S. Farley, whose promotion to superintendent of motive power, second mechanical district, Chicago, Rock Island & Pacific, with headquarters at El Reno, Okla. was reported in the *Railway Age* of August 27, was born in Missouri on June 19, 1891. He attended the public schools at Trenton, Mo., and entered railroad service in 1908 as a laborer, later serving as machinist apprentice at Horton, Kan. After completing his apprenticeship, Mr. Farley was employed on various roads as a machinist, and was subsequently appointed to that position on the Rock Island. He was later promoted to round house foreman at Trenton, which post he also held at Cedar Rapids, Iowa, and other points on the system, including Chicago, until his advancement to general foreman at Goodland, Kan. Mr. Farley was subsequently appointed general foreman at Chicago and El Reno, and in August, 1947, advanced to master mechanic at Chicago, in which capacity he was serving at the time of his promotion.

A. V. Nystrom, assistant to the general superintendent of motive power, Chicago, Rock Island & Pacific, has been appointed superintendent of the car department, with headquarters as before at Chicago. A photograph and biographical sketch of Mr. Nystrom appeared in the *Railway Age* of July 23, in connection with his appointment as assistant to the general superintendent of motive power.

ENGINEERING & SIGNALING

J. S. Giddings, superintendent of treating plants of the Atchison, Topeka & Santa Fe, at Somerville, Tex., has been advanced to assistant manager of treating plants, system, with headquarters at Topeka, Kan., succeeding **D. L. Murray**, whose promotion to manager of treating plants, system, at Topeka, was announced in the August 20 issue of *Railway Age*. **J. A. Pusinelli**, superintendent of the company's treating plant at Albuquerque, N. M., has been transferred to the plant at Somerville, Tex., as superintendent to succeed Mr. Giddings. **L. C. Callister** has been appointed superintendent of the treating plant at Albuquerque to replace Mr. Pusinelli.

SPECIAL

Victor Dell Aquila, supervisor of public relations and sales of the Railway Express Agency, has been named advertising manager, with headquarters as before at New York.

OBITUARY

Herbert E. Atkins, 51, superintendent of power at Grand Central Terminal, New York, and on the New York Central's Electric divisions, died on September 7 in St. John's hospital, Yonkers, N. Y.

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1912

Name of road	Av. mileage operated during period	Operating revenues			Maintenance of way and structures		Equipment	Operating expenses	Operating ratio	Total	Trans- portation	Traffic	Railway tax accruals	1948
		Freight	Passenger	Total (inc. misc.)	Way and structures	Equipment								
Akron, Canton & Youngstown.....	July 171	326,934	75	343,038	74,307	46,029	118,547	291,839	85.1	291,839	118,547	291,839	291,839	106,183
Akron, Canton & Youngstown.....	7 mos.	2,713,824	401	2,826,637	525,327	331,091	849,920	2,102,694	76.4	2,102,694	849,920	2,102,694	2,102,694	651,154
Akron, Canton & Youngstown.....	13 mos.	37,751,518	4,646,203	46,054,378	7,309,775	7,477,165	14,786,940	30,771,371	66.8	30,771,371	14,786,940	30,771,371	30,771,371	31,403,777
Atchafalaya, Topeka & Santa Fe System.....	July 171	228,868,125	28,662,441	282,474,313	46,755,683	55,463,338	102,219,021	216,953,551	66.1	216,953,551	102,219,021	216,953,551	216,953,551	31,403,777
Atchafalaya, Topeka & Santa Fe System.....	7 mos.	1,345,546	232,322	1,424,813	21,007	14,007	42,936	717,280	66.1	717,280	42,936	717,280	717,280	16,294
Atchafalaya, Topeka & Santa Fe System.....	82	1,029,798	10,494	1,085,426	186,252	140,161	47,271	302,472	66.1	302,472	47,271	302,472	302,472	274,815
Atlanta & St. Andrews Bay.....	July 82	227,829	58,481	324,412	32,825	49,910	13,912	162,180	86.4	280,282	162,180	280,282	280,282	6,282
Atlanta & St. Andrews Bay.....	7 mos.	2,726,602	327,199	2,723,974	349,899	58,394	100,845	1,173,771	88.7	2,061,472	1,173,771	2,061,472	2,061,472	111,651
Atlanta & St. Andrews Bay.....	93	236,505	57,172	320,105	38,539	58,394	13,874	138,288	83.9	268,206	138,288	268,206	268,206	24,853
Atlanta & St. Andrews Bay.....	133	1,776,940	321,975	2,301,723	297,846	91,058	100,829	3,810,674	98.3	8,203,440	3,810,674	8,203,440	8,203,440	54,436
Atlanta & St. Andrews Bay.....	7 mos.	58,634,947	6,310,738	75,921,517	11,738,116	14,210,267	2,133,432	31,749,829	83.6	63,473,374	2,133,432	63,473,374	63,473,374	5,688,683
Atlantic Coast Line.....	July 5,557	296,192	2,624	307,476	77,692	73,824	15,843	156,001	109.4	336,472	156,001	336,472	336,472	52,551
Atlantic Coast Line.....	7 mos.	2,683,037	19,108	2,769,428	568,387	547,150	111,095	1,202,924	90.7	2,512,183	1,202,924	2,512,183	2,512,183	250,865
Atlantic Coast Line.....	343	25,140,343	2,025,815	28,817,605	3,891,858	3,927,555	5,165,875	12,392,063	85.4	24,605,369	5,165,875	24,605,369	24,605,369	4,585,427
Atlantic Coast Line.....	6,201	194,186,356	13,010,930	219,104,062	27,143,670	43,927,555	5,165,875	91,252,311	80.8	177,081,745	91,252,311	177,081,745	177,081,745	24,867,276
Baltimore & Ohio.....	July 6,201	1,248,795	386,217	1,667,893	289,723	274,437	12,032	880,004	100.3	1,672,654	880,004	1,672,654	1,672,654	343,323
Baltimore & Ohio.....	7 mos.	11,765,890	1,355,168	13,121,058	2,000,000	1,900,000	382,245	15,000,000	104.9	13,121,058	382,245	13,121,058	13,121,058	56,178
Baltimore & Ohio.....	29	1,248,795	386,217	1,667,893	289,723	274,437	12,032	880,004	100.3	1,672,654	880,004	1,672,654	1,672,654	343,323
Staten Island Rapid Transit.....	July 29	309,799	57,881	367,680	62,862	164,869	12,518	223,209	113.5	704,906	223,209	704,906	704,906	52,137
Staten Island Rapid Transit.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Burlington-Rock Island.....	July 228	2,471,713	356,712	2,828,425	81,792	79,028	901	19,601	148.27	2,925,193	19,601	2,925,193	2,925,193	83,038
Burlington-Rock Island.....	7 mos.	21,115,000	3,175,346	24,280,346	3,363,032	3,280,180	771,487	9,917,387	91.2	24,280,346	771,487	24,280,346	24,280,346	1,342,611
Burlington-Rock Island.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	188,963
Burlington-Rock Island.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Burlington-Rock Island.....	234	148,405	14,709	163,114	32,000	24,344	5,893	119,964	116.5	163,114	119,964	163,114	163,114	43,530
Canadian Pacific Lines in Maine.....	July 90	973,349	9,736	983,085	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Canadian Pacific Lines in Maine.....	7 mos.	8,175,000	81,753	8,256,753	1,805,681	529,353	243,444	2,329,035	94.4	8,780,397	243,444	8,780,397	8,780,397	804,704
Canadian Pacific Lines in Maine.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	188,963
Canadian Pacific Lines in Maine.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Central of New Jersey.....	July 415	16,866,068	3,647,591	20,513,659	3,391,431	3,951,569	374,582	11,227,610	92.4	20,513,659	374,582	20,513,659	20,513,659	2,461,246
Central of New Jersey.....	7 mos.	148,405	14,709	163,114	32,000	24,344	5,893	119,964	116.5	163,114	119,964	163,114	163,114	43,530
Central of New Jersey.....	90	973,349	9,736	983,085	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Central of New Jersey.....	7 mos.	8,175,000	81,753	8,256,753	1,805,681	529,353	243,444	2,329,035	94.4	8,780,397	243,444	8,780,397	8,780,397	804,704
Central of New Jersey.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	188,963
Central of New Jersey.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Central of Pennsylvania.....	July 212	9,992,674	108,177	10,100,851	1,805,681	529,353	243,444	2,329,035	94.4	10,100,851	243,444	10,100,851	10,100,851	1,342,611
Central of Pennsylvania.....	7 mos.	81,753	817,531	899,284	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Central of Pennsylvania.....	422	16,930,769	2,939,352	19,870,121	3,363,032	3,280,180	771,487	9,917,387	86.6	19,870,121	771,487	19,870,121	19,870,121	2,461,246
Central of Pennsylvania.....	7 mos.	148,405	14,709	163,114	32,000	24,344	5,893	119,964	116.5	163,114	119,964	163,114	163,114	43,530
Central of Pennsylvania.....	90	973,349	9,736	983,085	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Central of Pennsylvania.....	7 mos.	8,175,000	81,753	8,256,753	1,805,681	529,353	243,444	2,329,035	94.4	8,780,397	243,444	8,780,397	8,780,397	804,704
Central of Pennsylvania.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	188,963
Central of Pennsylvania.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Central of Pennsylvania.....	415	16,866,068	3,647,591	20,513,659	3,391,431	3,951,569	374,582	11,227,610	92.4	20,513,659	374,582	20,513,659	20,513,659	2,461,246
Central of Pennsylvania.....	7 mos.	148,405	14,709	163,114	32,000	24,344	5,893	119,964	116.5	163,114	119,964	163,114	163,114	43,530
Central of Pennsylvania.....	90	973,349	9,736	983,085	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Central of Pennsylvania.....	7 mos.	8,175,000	81,753	8,256,753	1,805,681	529,353	243,444	2,329,035	94.4	8,780,397	243,444	8,780,397	8,780,397	804,704
Central of Pennsylvania.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	188,963
Central of Pennsylvania.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Central of Pennsylvania.....	415	16,866,068	3,647,591	20,513,659	3,391,431	3,951,569	374,582	11,227,610	92.4	20,513,659	374,582	20,513,659	20,513,659	2,461,246
Central of Pennsylvania.....	7 mos.	148,405	14,709	163,114	32,000	24,344	5,893	119,964	116.5	163,114	119,964	163,114	163,114	43,530
Central of Pennsylvania.....	90	973,349	9,736	983,085	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Central of Pennsylvania.....	7 mos.	8,175,000	81,753	8,256,753	1,805,681	529,353	243,444	2,329,035	94.4	8,780,397	243,444	8,780,397	8,780,397	804,704
Central of Pennsylvania.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	188,963
Central of Pennsylvania.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Central of Pennsylvania.....	415	16,866,068	3,647,591	20,513,659	3,391,431	3,951,569	374,582	11,227,610	92.4	20,513,659	374,582	20,513,659	20,513,659	2,461,246
Central of Pennsylvania.....	7 mos.	148,405	14,709	163,114	32,000	24,344	5,893	119,964	116.5	163,114	119,964	163,114	163,114	43,530
Central of Pennsylvania.....	90	973,349	9,736	983,085	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Central of Pennsylvania.....	7 mos.	8,175,000	81,753	8,256,753	1,805,681	529,353	243,444	2,329,035	94.4	8,780,397	243,444	8,780,397	8,780,397	804,704
Central of Pennsylvania.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	188,963
Central of Pennsylvania.....	7 mos.	3,356,458	297,592	3,654,050	382,167	296,673	34,210	1,162,082	62.1	3,654,050	382,167	3,654,050	3,654,050	398,027
Central of Pennsylvania.....	415	16,866,068	3,647,591	20,513,659	3,391,431	3,951,569	374,582	11,227,610	92.4	20,513,659	374,582	20,513,659	20,513,659	2,461,246
Central of Pennsylvania.....	7 mos.	148,405	14,709	163,114	32,000	24,344	5,893	119,964	116.5	163,114	119,964	163,114	163,114	43,530
Central of Pennsylvania.....	90	973,349	9,736	983,085	180,565	52,980	23,728	237,288	136.5	1,035,273	237,288	1,035,273	1,035,273	730,753
Central of Pennsylvania.....	7 mos.	8,175,000	81,753	8,256,753	1,805,681	529,353	243,444	2,329,035	94.4	8,780,397	243,444	8,780,397	8,780,397	804,704
Central of Pennsylvania.....	35	866,631	47,747	914,378	372,948	192,423	7,354	140,849	76.8	2,948,439	140,849	2,948,439	2,948,439	18

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1949

Name of road	Av. mileage operated during period	Operating revenues				Operating Expenses				Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Equipment	Traffic	Trans- portation	Total			Railway tax accruals	1948 1949
Colorado & Wyoming.....	July 41	106,901	.....	180,406	9,205	21,140	1,024	75,212	115,532	64.0	84,874	33,227	34,855
.....	7 mos. 41	920,150	.....	1,514,067	99,221	169,343	6,844	596,072	932,848	61.5	591,219	302,259	406,263
Columbus & Greenville.....	July 168	157,693	.....	162,151	41,771	48,820	4,844	46,427	158,558	97.8	3,593	8,911	4,107
.....	7 mos. 168	1,078,148	.....	1,119,044	261,590	216,896	32,177	316,694	946,396	84.6	172,648	116,206	108,309
Delaware & Hudson.....	July 794	3,657,660	216,278	3,873,938	607,612	829,097	66,160	1,714,600	3,396,864	85.2	589,869	332,731	444,972
.....	7 mos. 794	27,588,269	1,224,042	29,584,053	4,387,015	6,560,620	497,001	12,225,089	24,901,118	84.2	4,682,935	2,560,849	3,843,168
Delaware, Lackawanna & Western.....	July 968	5,029,836	924,736	6,451,440	991,801	1,119,672	147,426	2,964,314	5,459,104	84.6	992,336	542,525	948,637
.....	7 mos. 969	38,384,770	5,827,388	47,896,845	6,650,573	8,677,705	1,052,910	21,687,453	39,721,370	82.9	8,175,466	4,317,937	3,600,601
Denver & Rio Grande Western.....	July 2,413	4,450,109	332,594	5,076,599	5,076,599	883,745	165,505	1,901,534	4,252,458	83.8	824,131	418,872	451,694
.....	7 mos. 2,433	34,120,761	1,863,000	37,843,329	5,732,544	7,174,483	1,115,703	13,872,608	29,704,432	78.7	8,048,897	3,765,221	4,369,575
Detroit & Mackinac.....	July 232	130,806	835	139,931	139,931	19,330	1,955	33,213	92,437	66.1	47,494	19,453	56,527
.....	7 mos. 232	951,227	5,460	1,024,899	220,500	163,463	14,306	234,700	686,972	67.0	337,927	138,316	196,811
Detroit & Toledo Shore Line.....	July 50	382,868	.....	384,717	57,206	47,236	11,938	140,853	267,801	69.6	116,916	34,857	22,599
.....	7 mos. 50	3,650,338	.....	3,667,388	362,529	317,540	91,924	1,132,049	1,984,768	54.1	1,632,620	525,516	507,726
Detroit, Toledo & Ironton.....	July 464	1,101,543	.....	1,146,555	176,335	309,452	22,406	329,129	877,101	76.5	114,877	114,877	107,817
.....	7 mos. 464	8,791,149	.....	9,138,592	1,137,518	1,741,270	170,986	2,368,029	5,681,357	62.2	3,457,152	1,332,450	1,707,814
Duluth, Missabe & Iron Range.....	July 574	5,955,859	12,869	6,932,006	619,287	529,221	8,170	1,487,192	2,709,953	39.1	4,222,053	1,941,783	2,999,112
.....	7 mos. 574	22,375,403	35,319	26,170,011	4,268,888	3,682,821	58,050	7,211,032	15,661,063	59.8	10,508,948	5,234,758	5,242,169
Duluth, Winnipeg & Pacific.....	July 175	277,000	5,500	282,500	89,737	43,585	4,534	125,662	269,381	93.8	17,719	20,277	29,363
.....	7 mos. 175	1,881,000	19,400	1,926,800	483,161	331,358	29,859	992,331	1,788,497	87.8	138,103	156,703	139,111
Elgin, Joliet & Eastern.....	July 238	2,662,121	.....	2,662,121	415,990	950,080	25,915	1,250,566	2,743,787	82.8	508,533	235,314	603,897
.....	7 mos. 238	23,065,852	0	27,707,690	2,145,824	4,633,994	196,553	9,430,513	17,177,470	62.0	10,530,513	4,111,214	4,473,756
Erie.....	July 2,231	10,075,074	748,622	11,791,151	2,250,863	2,293,419	31,146	5,270,692	10,622,676	90.1	11,668,475	628,103	61,421
.....	7 mos. 2,230	77,163,356	4,442,981	87,596,676	12,680,170	16,390,111	224,051	37,056,403	72,729,656	83.0	14,867,130	7,193,130	5,334,158
Florida East Coast.....	July 575	857,058	374,821	1,355,486	440,961	358,732	60,636	617,107	1,612,383	119.0	256,897	281,067	588,997
.....	7 mos. 575	10,964,469	4,495,206	16,932,441	2,779,900	2,825,651	459,540	6,326,570	13,562,321	80.5	3,305,820	1,753,919	700,230
Georgia Railroad.....	July 326	53,416	35,000	60,926	82,480	101,012	24,414	302,239	530,741	89.2	65,537	33,281	51,127
.....	7 mos. 326	4,159,368	210,048	4,655,730	709,438	696,255	293,738	2,272,112	4,901,293	87.9	564,438	241,529	435,693
Georgia & Florida.....	July 408	214,823	.....	216,997	59,263	35,855	15,192	108,438	229,696	103.9	12,699	15,744	19,130
.....	7 mos. 408	1,596,212	987	1,618,164	500,150	259,247	109,020	718,522	1,666,116	103.9	47,952	111,586	267,190
Grand Trunk Western.....	July 971	3,483,000	225,000	3,917,000	684,493	642,043	69,543	1,685,922	3,232,496	82.5	684,504	253,556	270,321
.....	7 mos. 971	29,262,000	1,286,000	30,548,000	4,009,983	4,795,317	455,297	12,321,207	23,161,287	84.4	4,281,713	1,717,169	1,841,429
Canadian Natl. Lines in New Engl.....	July 172	1,111,000	26,000	1,137,000	1,009,977	30,376	2,837	101,212	249,303	137.0	67,303	22,576	112,951
.....	7 mos. 172	939,000	65,000	1,004,000	4,493	318,293	20,064	363,741	1,438,762	145.8	544,782	158,032	900,866
Great Northern.....	July 8,318	17,362,402	1,587,817	19,650,847	4,222,023	2,884,234	363,671	6,364,876	14,578,210	70.7	6,031,737	2,912,037	2,887,279
.....	7 mos. 8,318	101,007,327	7,080,827	117,543,915	24,813,973	20,967,398	2,484,039	44,051,381	96,836,804	82.4	20,707,111	12,087,161	6,924,354
Green Bay & Western.....	July 224	257,580	274	263,461	122,426	35,812	19,208	93,120	283,946	107.7	20,285	2,817	35,125
.....	7 mos. 224	1,946,878	330	1,995,580	375,502	225,160	130,227	653,607	1,673,971	83.9	321,609	166,546	46,028
Gulf, Mobile & Ohio.....	July 2,901	5,107,742	513,020	6,049,973	1,003,918	1,027,266	240,316	1,917,254	4,493,627	74.3	1,917,254	4,493,627	1,917,254
.....	7 mos. 2,901	36,104,142	3,174,740	42,255,489	7,380,418	7,430,202	1,586,066	13,926,806	32,452,220	76.8	9,856,346	608,104	717,989
Illinois Central.....	July 6,548	15,027,639	2,148,413	19,173,332	4,042,360	2,817,858	456,697	7,191,025	15,406,635	80.4	3,766,697	4,005,439	3,992,929
.....	7 mos. 6,548	115,097,112	14,306,384	145,116,483	25,741,553	25,474,433	3,156,817	54,061,029	114,934,584	79.2	30,181,899	16,346,967	13,048,230
Illinois Terminal.....	July 474	724,847	114,831	945,106	163,055	115,706	35,180	386,246	746,742	79.01	198,364	97,393	85,371
.....	7 mos. 474	5,304,593	783,948	6,776,381	1,078,290	935,870	256,178	2,722,062	5,308,655	78.34	1,467,726	739,019	690,905
Kansas City Southern.....	July 891	2,644,541	133,647	3,047,810	262,077	371,859	94,562	927,357	1,771,638	58.1	1,276,172	440,000	664,713
.....	7 mos. 891	20,485,852	701,486	22,936,866	1,991,595	2,727,110	660,318	6,068,067	12,939,189	56.4	9,997,678	3,483,000	5,235,377
Louisiana & Arkansas.....	July 756	1,250,500	61,000	1,383,762	160,074	155,347	46,923	456,252	876,034	63.3	507,728	211,648	243,708
.....	7 mos. 756	9,653,511	427,583	10,543,684	1,321,718	1,240,243	358,389	3,449,711	6,767,809	64.2	3,775,875	1,494,632	1,809,705
Kansas, Oklahoma & Gulf.....	July 328	405,532	732	409,376	74,864	33,478	15,932	107,117	251,209	61.4	158,167	72,895	62,892
.....	7 mos. 328	3,204,507	5,152	3,233,553	419,549	257,111	117,574	864,159	1,795,845	55.5	1,437,708	630,948	601,935
Lake Superior & Ishpeming.....	July 156	465,865	276	569,675	52,834	38,778	1,790	95,185	1,771,638	34.7	1,972,053	160,401	215,001
.....	7 mos. 156	1,928,057	713	2,325,545	334,445	337,023	12,821	517,541	1,266,789	54.5	1,058,645	539,967	544,279
Lehigh & Hudson River.....	July 96	208,726	.....	209,184	50,156	24,557	8,210	173,842	87,634	83.1	35,342	16,234	773
.....	7 mos. 96	1,655,118	.....	1,659,187	263,989	255,071	63,013	650,683	1,296,780	78.2	362,407	152,903	32,474
Lehigh & New England.....	July 191	640,290	.....	644,232	81,359	93,875	10,968	144,990	363,431	56.4	280,801	119,973	192,336
.....	7 mos. 191	4,150,750	.....	4,189,944	758,840	737,103	77,229	1,161,257	2,953,668	70.5	1,236,284	622,915	789,523
Lehigh Valley.....	July 1,252	36,501,890	396,036	5,992,102	599,130	1,066,807	129,389	4,935,388	825,607	88.3	656,714	255,192	683,086
.....	7 mos. 1,252	36,501,890	396,036	5,992,102	599,130	1,066,807	129,389	4,935,388	825,607	88.3	656,714	255,192	683,086
Louisville & Nashville.....	July 4,775	10,999,524	1,397,695	13,248,172	2,201,781	2,635,373	976,740	18,063,217	33,819,497	82.7	7,062,401	2,862,937	3,070,676
.....	7 mos. 4,775	92,204,450	8,286,293	106,982,020	16,140,480	23,308,699	2,121,980	44,816,249	90,487,552	84.6	16,494,468	11,467,434	8,456,454

Table continued on next left-hand page

Railway Age—September 17, 1949



A comfortable margin of **READY POWER**

From those who have watched our new switcher in service — on the Nickel Plate, Erie, New York Central, Cincinnati Union Terminal, St. Louis Terminal Railroad and Frisco, so far — come most favorable comments concerning available power and handling.

This is due to the simplified and efficient electrical control system. But more, it lies in the fact that this locomotive has a comfortable margin of ready power. The diesel easily develops 1200 hp at 950 rpm — it provides a full 1000 horsepower to the traction motors.

Ample power will keep maintenance at a low figure. This, with the many refinements suggested by operating men, plus others conceived by ourselves, will prove out on your railroad.

Arrange to have your people take a careful look at this switcher. It is powered by our own Hamilton-built engine. It uses standard Westinghouse rotating equipment. It uses standard accessories of the highest grade.

DIVISIONS: Lima, Ohio—Lima Locomotive Works Division; Lima Shovel and Crane Division. Hamilton, Ohio—Hooven, Owens, Rentschler Co.; Niles Tool Works Co. Middletown, Ohio — The United Welding Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.



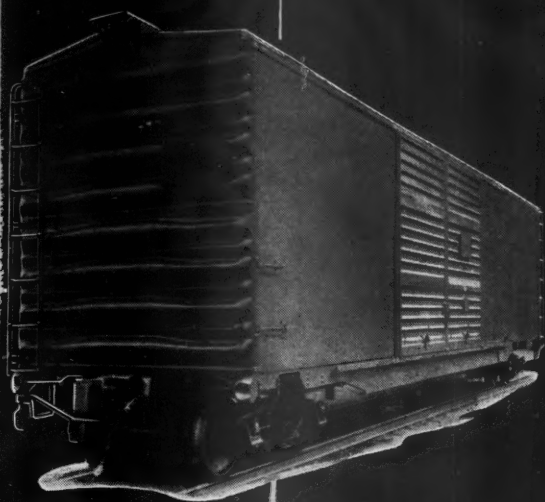
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1949

Name of road	Av. mileage operated during period	Operating revenues				Operating expenses				Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Way and structures	Maintenance of equipment	Traffic	Portation	Total			1949	1948
Maine Central.....	981	1,372,489	233,091	1,723,579	348,606	362,885	22,185	673,609	1,477,531	85.7	246,048	98,019	235,567
Midland Valley.....	981	12,805,107	1,088,023	14,750,397	2,489,933	2,968,848	134,312	5,088,279	11,163,433	75.7	3,586,964	1,458,088	1,576,863
Midland Valley.....	334	174,196	69	176,965	36,143	24,951	3,178	53,363	124,614	70.4	52,351	22,933	15,424
Midland Valley.....	334	1,022,245	69	1,094,355	266,035	139,731	25,160	377,116	855,858	78.2	236,497	68,881	122,748
Minneapolis & St. Louis.....	1,421	1,425,766	12,809	1,485,469	348,422	251,237	110,133	321,964	1,321,964	59.0	1,405,052	449,348	812,199
Minneapolis & St. Louis.....	1,421	10,127,128	71,869	10,523,283	2,144,421	1,815,010	756,346	3,746,946	9,118,251	56.6	1,405,052	449,348	812,199
Minneapolis, St. Paul & S. Marie.....	3,224	3,031,915	203,254	3,413,771	574,698	467,932	66,141	1,227,982	2,450,414	71.8	963,357	693,450	501,043
Minneapolis, St. Paul & S. Marie.....	3,224	17,091,119	735,027	18,777,131	4,030,493	3,460,955	449,987	6,277,774	16,949,145	89.3	2,027,986	1,397,474	373,097
Duluth, South Shore & Atlantic.....	530	2,947,588	89,559	3,211,951	785,927	675,620	126,069	1,409,636	3,074,284	102.0	137,607	160,688	394,511
Duluth, South Shore & Atlantic.....	530	1,597,786	1,522	1,713,300	41,442	18,103	4,213	77,533	150,655	88.0	20,645	-6,044	52,620
Spokane International.....	152	1,095,643	9,236	1,185,113	290,618	126,947	28,160	486,668	993,895	83.7	191,218	21,794	74,110
Mississippi Central.....	148	1,642,210	110	1,673,312	54,022	24,286	12,187	45,072	144,637	86.1	23,275	10,891	35,421
Mississippi Central.....	148	1,282,741	310	1,313,912	373,428	157,355	87,103	340,354	1,022,351	77.8	290,962	121,132	175,037
Missouri-Illinois.....	172	308,469	1,828	2,447,697	440,490	329,969	49,137	687,016	1,552,080	74.2	80,086	31,439	43,609
Missouri-Illinois.....	172	2,432,260	375,776	6,097,933	893,710	845,007	220,373	2,174,131	4,407,570	63.4	895,617	521,634	615,530
Missouri-Kansas-Texas Lines.....	3,253	5,269,384	2,585,707	43,113,283	6,415,563	6,288,889	1,549,222	16,724,704	32,982,046	76.5	10,131,237	3,520,731	4,621,332
Missouri-Kansas-Texas Lines.....	3,253	37,320,509	1,600,990	17,456,291	3,037,455	2,903,994	443,485	6,306,564	13,263,673	76.0	4,192,618	1,365,502	2,118,942
Missouri Pacific.....	7,004	99,604,376	7,067,238	116,851,573	18,666,605	20,277,714	2,895,608	45,920,770	91,798,087	78.6	25,053,391	12,233,188	14,292,370
Missouri Pacific.....	7,004	1,111,637	3,046,069	575,554	7,078,247	3,877,974	7,280	7,078,247	2,237,664	73.5	808,405	222,491	532,951
Gulf Coast Lines.....	1,712	21,680,230	680,636	23,510,881	4,064,204	2,833,302	572,223	7,909,776	16,235,823	69.1	7,275,058	2,156,373	5,130,975
Gulf Coast Lines.....	1,712	2,157,554	193,959	2,570,478	516,185	418,929	52,909	1,050,467	2,144,358	53.4	426,120	114,664	224,609
International-Great Northern.....	1,110	15,351,654	1,225,082	18,352,321	3,205,097	2,842,132	366,030	7,839,187	14,999,101	81.7	3,353,220	844,025	1,594,488
International-Great Northern.....	1,110	332,277	1,112	336,316	61,786	57,301	353	130,597	256,561	76.3	79,755	71,869	111,906
Monongahela.....	170	4,113,333	7,295	4,151,614	560,668	463,459	6,568	1,307,405	2,457,461	59.1	1,699,316	526,602	373,581
Monongahela.....	170	1,138,352	.....	1,138,352	51,483	48,744	831	1,307,405	2,457,461	113.6	-18,825	17,539	55,475
Montour.....	51	1,676,009	184,665	2,380,144	378,926	323,539	103,524	528,344	1,306,921	77.5	378,377	354,497	456,500
Montour.....	51	1,971,748	1,295,411	18,772,265	3,107,036	2,642,198	745,578	7,851,895	15,156,942	80.7	3,615,323	1,924,184	1,560,295
Nashville, Chattanooga & St. Louis.....	1,049	15,694,211	10,985,130	53,927,405	8,170,446	9,637,191	978,448	25,078,509	46,796,702	86.8	7,130,703	4,500,569	5,482,637
Nashville, Chattanooga & St. Louis.....	1,049	327,820,216	70,275,230	417,714,546	56,366,317	83,101,009	7,063,124	187,193,374	355,089,259	86.4	55,685,287	14,306,222	17,538,440
New York Central.....	10,731	297,820,216	10,985,130	53,927,405	8,170,446	9,637,191	978,448	25,078,509	46,796,702	86.8	7,130,703	4,500,569	5,482,637
New York Central.....	10,731	2,494,280	99,019	2,704,085	3,152,461	7,421,127	471,313	8,795,303	21,411,292	103.4	-92,122	315,160	219,993
Pittsburgh & Lake Erie.....	221	23,574,849	590,542	25,397,745	3,152,461	7,421,127	471,313	8,795,303	21,411,292	83.8	4,083,453	4,624,099	5,625,711
Pittsburgh & Lake Erie.....	221	1,686,98	152,685	1,397,454	1,162,497	1,136,913	217,255	2,915,486	5,753,986	77.8	1,643,468	692,459	669,635
New York, Chicago & St. Louis.....	1,686.98	55,326,530	890,604	57,609,026	7,941,434	9,218,718	1,536,943	20,763,359	41,649,700	72.3	15,959,326	7,568,177	9,190,331
New York, Chicago & St. Louis.....	1,686.98	5,955,039	4,721,535	11,659,495	1,723,449	1,822,337	241,816	4,975,156	9,501,511	81.5	2,157,984	862,000	1,200,192
New York, Chicago & St. Louis.....	1,686.98	48,994,705	29,164,247	86,308,144	12,451,741	12,811,335	1,692,920	36,365,567	68,808,000	79.7	17,500,146	5,433,309	5,558,773
New York, Chicago & St. Louis.....	1,686.98	1,500,809	.....	155,844	79,230	56,084	.....	51,027	1,109,718	121.0	-32,765	60,914	61,006
New York, Chicago & St. Louis.....	1,686.98	1,410,320	53,769	1,08,068	495,283	193,530	28,707	402,773	1,109,718	74.4	381,054	434,338	376,558
New York, Chicago & St. Louis.....	1,686.98	526,240	.....	619,253	108,068	87,721	28,707	290,641	548,436	88.6	70,819	40,218	50,281
New York, Chicago & St. Louis.....	1,686.98	3,472,207	78,684	3,494,394	666,998	618,839	207,384	1,868,236	3,585,165	93.1	264,229	261,047	844,892
New York, Chicago & St. Louis.....	1,686.98	291,378	37,027	342,701	46,916	56,836	5,929	157,867	288,502	84.2	54,199	33,043	14,296
New York, Chicago & St. Louis.....	1,686.98	2,298,160	288,615	2,676,950	334,554	386,849	43,394	1,191,005	2,329,292	79.7	544,658	222,619	129,425
New York, Chicago & St. Louis.....	1,686.98	525,284	9,169,721	10,104,616	1,860,666	1,968,823	262,159	3,707,936	8,332,726	82.5	1,771,890	903,536	3,304,674
Norfolk & Western.....	2,129	88,497,790	3,387,932	95,978,064	13,484,237	21,445,937	1,911,660	30,320,022	71,091,354	74.0	24,976,710	15,283,955	21,344,254
Norfolk & Western.....	2,129	583,752	.....	604,779	148,232	73,757	42,156	223,175	537,927	88.9	66,852	40,247	15,425
Norfolk Southern.....	683	4,875,799	2,594	5,047,435	1,008,777	637,267	307,718	1,701,594	4,061,642	80.5	985,793	518,668	539,569
Norfolk Southern.....	683	11,419,479	870,214	13,376,801	2,738,515	2,558,180	283,389	4,846,119	10,902,085	81.5	2,474,716	1,290,435	1,598,713
Norfolk Southern.....	683	72,040,673	4,477,117	83,091,826	17,171,640	17,279,522	1,889,633	32,794,428	73,547,397	88.5	9,544,459	8,127,498	7,185,826
Norfolk Southern.....	683	5,691	658,207	658,207	1,165,422	87,387	4,879	305,705	377,212	87.7	80,995	40,828	5,544
Northwestern Pacific.....	331	4,268,454	35,390	4,474,847	1,967,955	597,340	32,094	2,208,134	4,199,564	93.8	275,233	272,239	305,034
Northwestern Pacific.....	331	55,497	.....	56,467	25,684	29,586	1,369	20,192	53,246	97.8	1,221	471	10,590
Oklahoma City-Ada-Atoka.....	132	559,593	.....	565,468	148,031	29,586	10,506	152,230	306,322	64.8	199,146	73,950	50,572
Oklahoma City-Ada-Atoka.....	132	48,395,593	13,060,319	67,949,264	9,083,169	15,359,837	1,271,518	30,301,777	58,885,201	86.7	9,064,063	5,158,483	7,128,407
Pennsylvania.....	10,142	388,091,072	89,479,249	524,576,997	67,173,041	114,352,618	8,850,732	233,999,543	445,021,862	84.8	79,555,372	41,543,738	25,225,478
Pennsylvania.....	10,142	990,914	3,758,466	4,941,549	504,081	810,714	32,034	2,280,024	3,726,433	75.4	1,215,116	458,042	374,128
Long Island.....	376	7,707,030	19,981,968	28,992,528	3,831,505	5,364,243	228,237	15,808,368	26,418,862	91.1	2,573,646	3,206,391	-2,476,484
Long Island.....	376	-3,062,272



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REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1949

Name of road	Av. mileage operated during period	Operating revenues			Maintenance of			Operating Expenses			Operating ratio	Net from operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Way and structures	Equip-ment	Traffic	Transportation	Total				Railway tax accruals	1949
Pennsylvania-Reading Seashore Lines.....	July	416,698	731,741	1,148,439	131,163	86,072	11,145	692,766	975,221	83.3	11,417,370	5,971,198	91,615	37,475
Pittsburgh & Shawmut.....	7 mos.	3,297,957	1,933,998	5,231,955	1,374,194	1,125,434	76,149	4,077,569	6,521,400	127.0	1,461,877	1,461,877	631,434	2,942,850
Pittsburgh & West Virginia.....	July	1,382,466	1,337,151	2,719,617	35,197	29,548	2,339	382,187	122,567	88.1	16,605	16,605	11,074	19,718
Pittsburgh & West Virginia.....	7 mos.	1,337,151	1,337,151	2,674,302	35,197	29,548	2,339	382,187	122,567	88.1	16,605	16,605	11,074	19,718
Pittsburgh & West Virginia.....	July	555,874	646	556,520	136,536	106,464	40,049	155,059	279,048	82.1	1,046,808	1,046,808	62,535	177,716
Pittsburgh & West Virginia.....	7 mos.	4,533,462	646	4,534,108	944,461	935,892	291,229	1,214,055	3,621,819	77.6	1,046,808	1,046,808	567,395	820,283
Reading.....	July	7,282,968	648,050	7,931,018	1,472,792	1,835,063	136,288	3,553,517	7,307,934	87.5	1,040,581	1,040,581	557,507	519,550
Reading.....	7 mos.	59,330,106	4,575,361	63,905,467	13,746,383	13,746,383	933,876	27,441,328	55,616,539	82.6	11,747,370	11,747,370	5,971,198	5,527,843
Richmond, Fredericksburg & Potomac.....	July	1,044,109	667,126	1,711,235	268,772	230,322	723,207	723,207	1,447,893	77.9	410,609	410,609	263,954	104,713
Rutland.....	7 mos.	8,569,183	3,959,369	12,528,552	2,233,105	2,335,755	149,902	5,983,906	11,611,462	82.5	2,465,997	2,465,997	1,323,239	562,014
Rutland.....	July	3,088,864	37,763	3,126,627	68,462	82,347	13,465	237,528	418,531	101.3	93,343	93,343	27,960	82,334
Rutland.....	7 mos.	2,396,788	210,225	2,607,013	582,432	630,767	99,955	1,769,554	3,209,748	103.0	93,343	93,343	206,319	429,151
Sacramento Northern.....	July	203,728	.....	203,728	62,860	17,533	2,201	70,909	160,697	77.1	47,714	47,714	13,116	22,325
St. Louis-San Francisco.....	7 mos.	1,071,477	532,446	1,603,923	586,978	1,470,199	147,863	1,470,199	3,094,938	66.3	1,131,302	1,131,302	673,921	522,199
St. Louis, San Francisco & Texas.....	July	51,336,346	3,872,576	55,208,922	10,626,994	10,626,994	1,666,716	24,607,194	50,395,270	84.6	9,141,302	9,141,302	5,024,430	4,117,605
St. Louis, San Francisco & Texas.....	7 mos.	3,966,894	73,015	4,040,909	54,085	35,663	15,448	146,269	1,672,991	74.8	665,218	665,218	183,388	91,724
St. Louis Southwestern Lines.....	July	4,006,730	72,704	4,079,434	716,424	657,177	144,842	1,453,055	3,152,431	73.9	1,112,303	1,112,303	505,118	413,793
Seaboard Air Line.....	7 mos.	32,159,483	425,849	32,585,332	4,673,235	4,673,235	1,003,013	11,269,717	22,846,638	67.6	10,967,449	10,967,449	4,609,017	4,860,066
Southern Railway.....	July	59,701,969	9,768,433	69,470,402	13,776,793	13,776,793	2,257,313	28,364,255	60,364,260	80.8	14,303,596	14,303,596	6,838,574	6,310,215
Southern Railway.....	7 mos.	12,790,597	1,748,673	14,539,270	2,471,529	3,363,700	348,610	6,453,161	13,411,545	85.2	2,324,998	2,324,998	1,232,220	1,020,984
Southern Railway.....	6,411	103,129,406	10,903,703	114,033,109	18,775,868	24,213,949	2,545,103	48,545,133	99,478,585	80.7	23,706,424	23,706,424	11,672,488	10,780,108
Alabama Great Southern.....	July	908,617	137,168	1,045,785	233,033	277,347	29,005	462,171	1,055,195	85.5	179,666	179,666	110,767	75,967
Cinn., New Orleans & Texas Pacific.....	7 mos.	316	316	632	1,470,199	1,470,199	208,062	3,293,646	7,332,164	79.0	1,951,279	1,951,279	1,225,575	852,228
Georgia Southern & Florida.....	July	2,958,870	1,355,513	4,314,383	2,830,915	4,012,264	424,352	6,572,898	14,593,386	69.7	7,160,667	7,160,667	3,511,412	4,828,521
Georgia Southern & Florida.....	7 mos.	3,300,666	528,587	3,829,253	998,847	396,555	50,986	1,472,112	3,029,494	72.0	1,176,098	1,176,098	28,361	5,982
New Orleans & Northeastern.....	July	645,638	57,313	702,951	145,153	97,050	16,045	1,453,055	3,152,431	73.9	1,112,303	1,112,303	505,118	413,793
Southern Pacific.....	7 mos.	29,479,816	3,804,753	33,284,569	4,479,218	7,017,736	726,852	14,701,977	28,677,720	77.3	8,400,846	8,400,846	2,908,513	3,906,221
Texas & New Orleans.....	7 mos.	197,152,212	23,882,513	221,034,725	31,421,216	48,197,129	5,109,563	99,699,303	197,898,244	83.0	43,515,942	43,515,942	21,072,922	12,251,900
Texas & New Orleans.....	July	7,942,523	812,816	8,755,339	1,527,107	1,249,862	222,438	3,548,662	7,013,042	75.2	2,307,974	2,307,974	897,205	973,490
Texas & New Orleans.....	6,416	57,826,796	5,182,369	63,009,165	10,601,787	9,859,336	1,534,369	25,884,294	51,189,811	76.1	16,056,128	16,056,128	6,700,522	6,101,893
Spokane, Portland & Seattle.....	July	1,723,458	113,399	1,836,857	415,340	217,771	19,997	706,194	1,447,698	73.7	517,442	517,442	162,744	248,323
Tennessee Central.....	7 mos.	12,009,411	644,592	12,654,003	1,715,428	1,715,428	151,205	4,988,182	10,399,685	77.2	3,075,058	3,075,058	1,118,094	1,254,722
Texas & Northern.....	July	2,362,469	19,070	2,381,539	58,965	366,660	69,436	1,026,137	2,047,192	81.5	464,087	464,087	182,637	126,381
Texas & Northern.....	7 mos.	3,698	39,639	43,337	2,213	3,028	240	16,423	26,206	66.3	13,343	13,343	3,027	5,613
Texas & Pacific.....	July	4,364,339	439,827	4,804,166	834,256	532,801	169,242	1,858,377	3,977,779	75.4	1,299,152	1,299,152	435,382	575,801
Texas Mexican.....	7 mos.	31,072,903	2,933,415	34,006,318	5,177,773	5,822,931	1,165,664	14,477,977	29,677,720	77.3	8,400,846	8,400,846	2,908,513	3,906,221
Toledo, Peoria & Western.....	July	2,147,336	.....	2,147,336	61,296	27,484	6,089	62,068	170,714	64.2	95,038	95,038	12,323	19,748
Union Pacific System.....	7 mos.	27,015,535	3,495,515	30,511,050	3,419,074	6,145,748	719,735	12,120,073	27,156,651	81.3	6,262,423	6,262,423	3,721,903	998,201
Utah.....	July	176,435,732	18,562,267	195,000,000	39,573,192	42,000,680	5,430,266	83,131,377	183,482,438	85.8	30,382,337	30,382,337	22,317,473	18,261,482
Virginian.....	7 mos.	1,824,966	5,366	1,830,332	273,352	374,068	5,058	509,951	1,080,045	114.4	152,363	152,363	92,193	70,170
Virginian.....	July	376,469	140	376,609	496,517	215,300	233,991	719,738	1,827,373	67.4	884,507	884,507	348,952	368,092
Wabash.....	7 mos.	7,223,400	442,750	7,666,150	1,296,306	1,070,927	252,717	3,302,642	6,263,678	76.3	1,940,760	1,940,760	743,574	733,830
Ann Arbor.....	July	45,578,763	2,791,002	48,369,765	8,256,106	7,726,518	1,773,655	22,731,979	42,686,840	81.6	9,653,913	9,653,913	3,877,505	3,356,844
Western Maryland.....	7 mos.	2,941,623	4,401	2,946,024	169,275	93,558	25,716	292,630	602,685	89.1	73,778	73,778	37,407	215,262
Western Maryland.....	July	4,297,679	21,498	4,319,177	686,202	757,935	158,675	2,022,123	3,741,006	84.2	703,533	703,533	347,409	245,269
Western Maryland.....	7 mos.	23,942,901	17,359	23,960,260	4,666,919	5,973,588	69,305	960,411	12,230,033	82.5	2,230,450	2,230,450	267,000	277,450
Western Pacific.....	July	2,674,521	355,331	3,029,852	834,446	567,223	184,042	1,208,147	3,017,294	96.6	105,771	105,771	580,230	619,452
Wheeling & Lake Erie.....	7 mos.	20,844,104	1,754,787	22,598,891	4,242,422	4,037,541	1,195,239	8,581,961	19,576,573	84.1	3,708,384	3,708,384	1,069,807	2,189,467
Wisconsin Central.....	July	1,816,440	97,595	1,914,035	385,455	296,052	56,556	850,120	1,679,333	66.8	3,171,105	3,171,105	1,007,902	1,273,914
Wisconsin Central.....	7 mos.	14,346,812	374,013	14,720,825	2,344,118	2,361,774	67,710	6,710,364	12,427,596	79.7	7,340,200	7,340,200	3,621,000	4,314,838
Wisconsin Central.....	6,416	57,826,796	5,182,369	63,009,165	10,601,787	9,859,336	1,534,369	25,884,294	51,189,811	76.1	16,056,128	16,056,128	6,700,522	6,101,893
Wisconsin Central.....	7 mos.	1,051	1,051	2,102	1,051	1,051	1,051	1,051	1,051	1,051	1,051	1,051	1,051	1,051

GENERAL NEWS

(Continued from page 96)

Waybill Studies

Two additional waybill studies have been issued recently by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. They are: Statement No. 4927, Distribution of Freight Traffic and Revenue Averages in the Manufactures and Miscellaneous and Forwarder Traffic Groups by Commodity Classes and Rate Territories—Terminations in 1947; and No. 4929, Distribution of Freight Traffic and Revenue Averages by Commodity Classes—Terminations in 1948.

July Truck Traffic

Motor carriers reporting to American Trucking Associations (transported in July a total of 2,859,681 tons of freight, a decrease of 8.4 per cent below the previous month's total of 3,121,144 tons and a drop of 1.3 per cent below the 2,897,985 tons hauled in July, 1948. The figures, according to A.T.A., are based on comparable reports received from 318 truckers in 43 states.

Safety Award to Cotton Belt

The St. Louis Southwestern, on September 12, became the fifth railroad to receive the National Safety Council's Award of Honor for Distinguished Service to Safety, the presentation of which was inaugurated in 1942. L. W. Dutton, staff representative of the council, presented the award at a ceremony in the road's general offices at St. Louis, Mo., in recognition of the Cotton Belt's outstanding safety record in 1948.

Telephone Service on "Lark"

Effective September 19, radio-telephone service will be made available to all patrons of the "Lark," the Southern Pacific's streamlined night train between San Francisco, Cal., and Los Angeles.

E.C.A. Funds Buy Rolling Stock for West Africa Roads

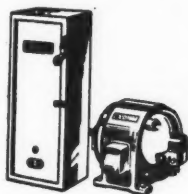
The first Marshall-Plan purchases of railroad locomotives and box cars for French West Africa, totaling \$4,447,000, were announced recently by the Economic Cooperation Administration. Under the procurement authorizations, the orders are for 16 Diesel-electric locomotives "with a few spare parts," to be delivered in the first six months of 1950; and 330 box cars, to be delivered during the last three months of this year.

The locomotives have been ordered from the Whitcomb Locomotive Company, while the box cars will be built by the Magor Car Corporation. The equipment will be used on three railroads in French West Africa—the Congo Ocean, the Cameroon, and the Dakar-Niger. The E.C.A. announcement described these roads as "vital transpor-

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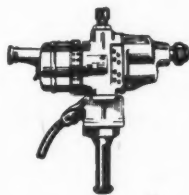
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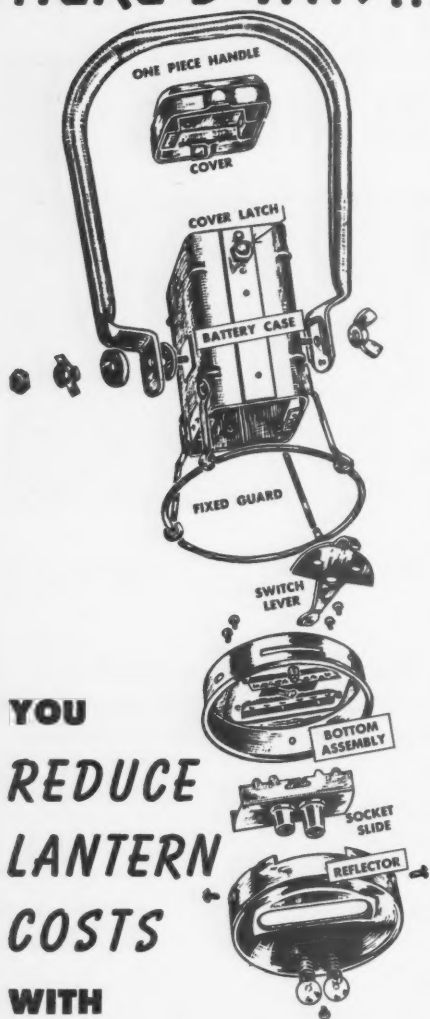
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tation links in freight movements from inland points to the sea."

It also said that the purchases had previously received E.C.A. approval; but the final procurement authorizations were not issued until now, "because the equipment could not be supplied—box cars were until recently in short supply in the United States." The cost of the locomotives and parts was given as \$3,105,000, while the amount authorized for the box cars totaled \$1,342,000.

Abandoned Texas Line Denied More Mail Pay for 1948

Division 3 of the Interstate Commerce Commission has denied an application of the Texas Electric, which discontinued operations on January 1, for increased mail pay for the 1948 period from April 12 to December 31. The division's report was in the No. 29943 proceeding.

The mail pay which the road sought to have increased included that earned under a special agreement with the Post Office Department which made the rate for some service lower than that fixed by the commission as fair and reasonable. The commission found that it had no jurisdiction to award higher pay for the services involved than that fixed by the agreement which the road entered voluntarily "with full knowledge that the commission had fixed. . . a higher rate for the service." As to the rates over which it did have jurisdiction, the commission found that the T.E. had failed to show that they were not "fair and reasonable."

P. R. R. Re-equips "Golden Triangle" and "Pittsburgher"

Two of the Pennsylvania's overnight streamliners—the "Pittsburgher" and the "Golden Triangle"—have been completely re-equipped, it was announced this week. Four complete trains are required to provide service by the all-room "Pittsburgher" between Pittsburgh, Pa., and New York, and the "Golden Triangle" between Pittsburgh and Chicago. The four newly equipped units, complete with their Diesel-electric locomotives, cost \$7,042,600.

New Haven Asks Increase in Massachusetts Intrastate Fares

A 20 per cent increase in basic one-way fares and a 35 per cent increase in commutation fares within Massachusetts is sought by the New York, New Haven & Hartford in a petition filed with the Massachusetts Department of Public Utilities. The New Haven is willing, its petition states, that any order granting increases be given on an experimental basis.

The New Haven's petition followed its announcement, reported on page 75 of last week's *Railway Age* of a 4-point plan proposed for insuring continued operation this fall and winter of 85 per cent of the passenger train service operated last winter on the former Old Colony. A fare increase was a necessary part of that plan, but the petition also

includes request for an increase in fares for all intrastate travel in Massachusetts.

The state-wide increase is necessary, the petition states because of increased wages, costs of materials and the five-day work week granted to non-operating employees on September 1. "A study of the facts shows," Laurence F. Whittemore, president of the road, said, "that in at least the majority of cases a 35 per cent increase in present commuter fares will only bring them up to the approximate level of the present costs of traveling to and from Boston by a combination trip involving buses and the Metropolitan Transit Authority."

Greyhound, Trailways, Agencies Get Nationwide Broker Rights

Greyhound Highway Tours, Inc., and National Trailway Bus System, agencies, respectively, of bus-line members of the Greyhound and Trailways networks, have been authorized by the Interstate Commerce Commission to operate at any point in the United States as brokers in arranging transportation by motor vehicle of passengers and their baggage, in round-trip sight-seeing trips and in all-expense tours. The report, approving issuance of the broker licenses to the two agencies, was made by the commission's Division 5 in the No. MC-12387 proceeding.

National Trailways' previous license authorized brokerage operations only at New York and Chicago. The previous license of Highway Tours authorized such operations only at Cleveland, Ohio. The commission's report said that the agencies had found those operations "insufficient to accomplish effectively their purposes."

Hearing in Eastern L.C.L. Case Now Set for Oct. 18

The Interstate Commerce Commission has now set October 18 as the date for the further hearing in the reopened proceeding wherein eastern railroads are proposing to increase their rates on l.c.l. and any-quantity traffic. The hearing, which had previously been assigned for October 25, will be held at Washington, D. C., before Examiner M. J. Walsh (see *Railway Age* of September 3, page 74).

I.C. Installs Radio At New Orleans

A new two-way radio installation was placed in operation on the Illinois Central, at Mays Yard, New Orleans, La., on September 1, according to J. M. Trissal, superintendent of communication and electrical engineer of the railroad. The system includes the use of light-weight walkie-talkies, in addition to a main base transmitter, and is being used principally to check cars in the classification yard, a job normally requiring a great amount of footwork.

The main transmitter, Station KKA-964, has a power output of 35 watts

Railway INSULMAT

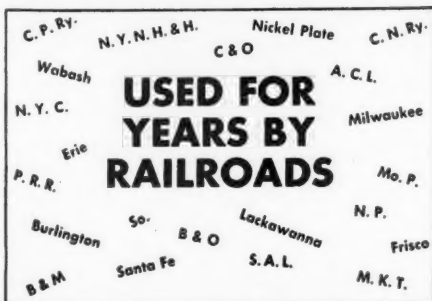
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and operates on a frequency of 160.59 megacycles, with an effective range embracing the entire New Orleans area. Each walkie-talkie unit, using the call letters KA3919, weighs less than 10 lb. Operating on the same frequency as the main transmitter, these units have a power output of less than one watt, and enable men in any part of the yard to communicate with the yard office. The units are powered by small storage batteries which are good for a full eight-hour shift, and which can be recharged before the worker returns to his job the following day.

The field work and installation on this project were handled under the direction of P. B. Burley, assistant superintendent of communication of the railroad, the equipment having been furnished by Doolittle Radio, Inc., and Motorola, Inc.

A.A.R. Issues New Edition Of Overcharge Claim Directory

Copies of the latest (August, 1949) edition of the Overcharge Claim Directory have been supplied by the Accounting Division, Association of American Railroads, to officers of its member roads who are in direct charge of handling overcharge and agency relief claims. As Division Secretary E. R. Ford explained in a recent circular, the directory "is primarily designed for use in the settlement of overcharge claims," and thus "is intended as an accurate index of sources of information regarding rates and divisions, interline freight settlements, car movements, etc."

The circular also said that the division has copies of the directory for sale at 25 cents each. Orders should be placed with Mr. Ford, Transportation building, Washington 6, D. C., with remittances made payable to the A.A.R.

List Changes in Minnesota Rail Course, September 26-October 8

Director Edmund A. Nightingale has announced the following changes from the program published in the *Railway Age* of September 10, page 91, for the second Rail Transportation Institute, which the University of Minnesota, Minneapolis, is sponsoring in cooperation with the Association of American Railroads, September 26 to October 8, inclusive:

SEPTEMBER 27 (SUBSTITUTION)

Frederick E. Sperry, assistant vice president — operation, Chicago, Burlington & Quincy, Chicago, for Robert E. Mattson, general superintendent of transportation, Northern Pacific, a 9 a.m. (Transportation Department discussion).

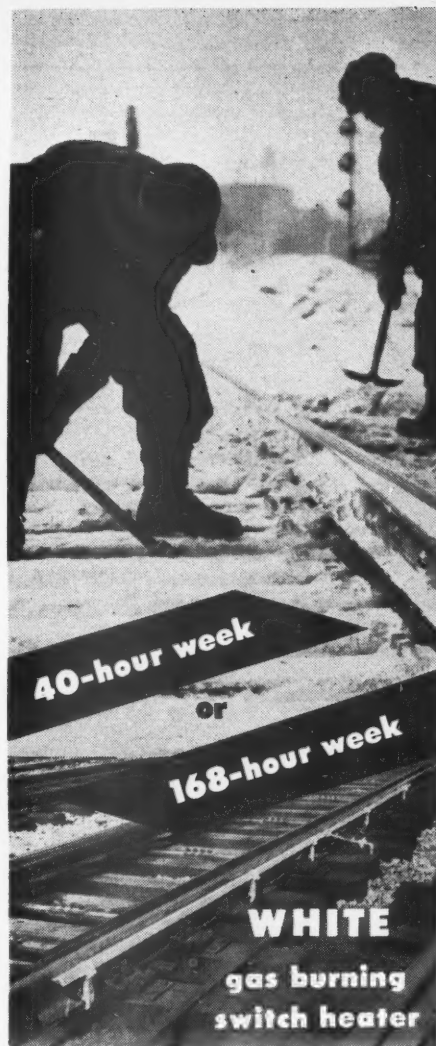
SEPTEMBER 29 (ADDITION)

Dinner speaker—General Carl R. Gray, Jr., Administrator of Veterans Affairs, Veterans Administration, Washington, D. C., on The Summary of Military Railway Transportation.

OCTOBER 4 (SUBSTITUTION)

Rex R. Manion, engineer maintenance of way, Great Northern, St. Paul, Minn., for Herbert R. Clarke, chief engineer, C. B. & Q., Chicago, at 9 a.m., on Current Problems in Maintenance of Way.

B. B. Brownell, chief electrical engineer, Electro-Motive Division, General Motors Corporation, La Grange, Ill., for C. R. Osborn, general manager of Electro-Motive and vice-president of General Motors, at 1:30 p.m., on New Technical Developments—Motive Power.



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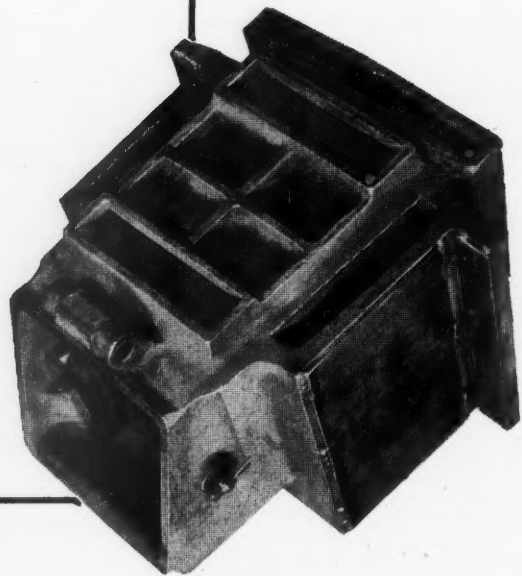
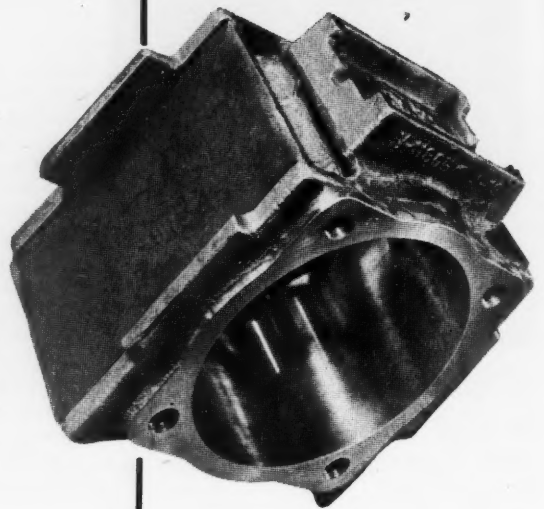
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